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HIGHLIGHTS

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Between Ourselves

Within the last couple of years, archeological searchers in Africa have unearthed many parts of the skeleton of the most primitive type of human. Subsequent tests have revealed that this creature lived over a million and a half years ago. Through the thousands of generations that have come and gone in the intervening years, little or no concern was felt for the well-being of infants and children until fairly recently.

Four thousand years ago, King Hammurabi of Babylonia drew up the first recorded regulations respecting the medical and surgical treatments that were to be provided by the priest-physicians. The enormous shaft of rock on which these and other laws were carved is still preserved. Very few references are made to children. A death penalty for kidnapping them is mentioned but nothing about their feeding or ailments.

Egyptian hieroglyphics contain pictures of a surgeon performing an operation. The Old Testament gives us a record of the achievements of the Hebrews in the practice of sanitation and disease prevention. Circumcision was almost the only part of their religious observance that related specifically to infants.

The awakening of medical interest in the study of the health management of infants and children and the development of scientific nursing care of these youngsters occupy only a few seconds in the long time-story of mankind. The first hospital for the care of sick children, opened in 1852, was staffed by the Sairy Gamps of that day — an obstacle to proper care that spurred Charles Dickens to castigate those women in terms with which we have long been familiar.

Pediatric training and experience has been a part of the curriculum for student nurses in Canada since early in this century. Many textbooks by skilled authors are available on this broad topic. In assembling the material for this issue, therefore, an effort was made to provide the most up-to-date developments in a variety of aspects of pediatrics some of which have not been incorporated into textbooks yet. Most of the articles are short and to the point. We trust you will find much valuable information here.

We pay tribute to our Montreal-based authors both French and English. When our Editorial Advisor, SISTER MARY ASSUMPTA, first began to discuss the building of this issue with some of the pediatricians at St. Mary's Memorial Hospital, she was amazed and somewhat non-plussed by their enthusiasm for the project. "They literally took it out of my hands," Sister told us. Those men enlisted the assistance of their colleagues at the Montreal Children's Hospital and at Hôpital Sainte-Justine pour les enfants. The results of their efforts are before you.

* * *

Were you surprised when your September issue reached you in August? Are you not pleased that subsequent issues are reaching you so early? We are delighted that our new printers are accomplishing what seemed to be the impossible heretofore — getting the *Journal* in your hands before or by the beginning of the month of publication.

This change of date has meant that we have to address the labels for your copies at least two weeks earlier than we used to. It means, in practical terms of dates, that if your change of address reaches us on or before the 10th of any month, your next copy will go to your new address. After the 10th, the probabilities are that the old address will appear on your next issue.

For some obscure reason, some subscribers have been sending a change of address to the office of our Association in Ottawa instead of to us in Montreal. Some have even sent it to Lippincott's ! Such letters or cards have to be re-addressed to Montreal which frequently means sufficient delay that we do not receive it until after the 10th. Please use our correct address at all times. Here it is again :

1522 Sherbrooke Street West, Montreal 25, Que.

In nature there are neither rewards nor punishments — there are consequences.

R. G. INGERSOLL

THE CANADIAN NURSE

VOLUME 58 **NUMBER 11**

NOVEMBER 1962

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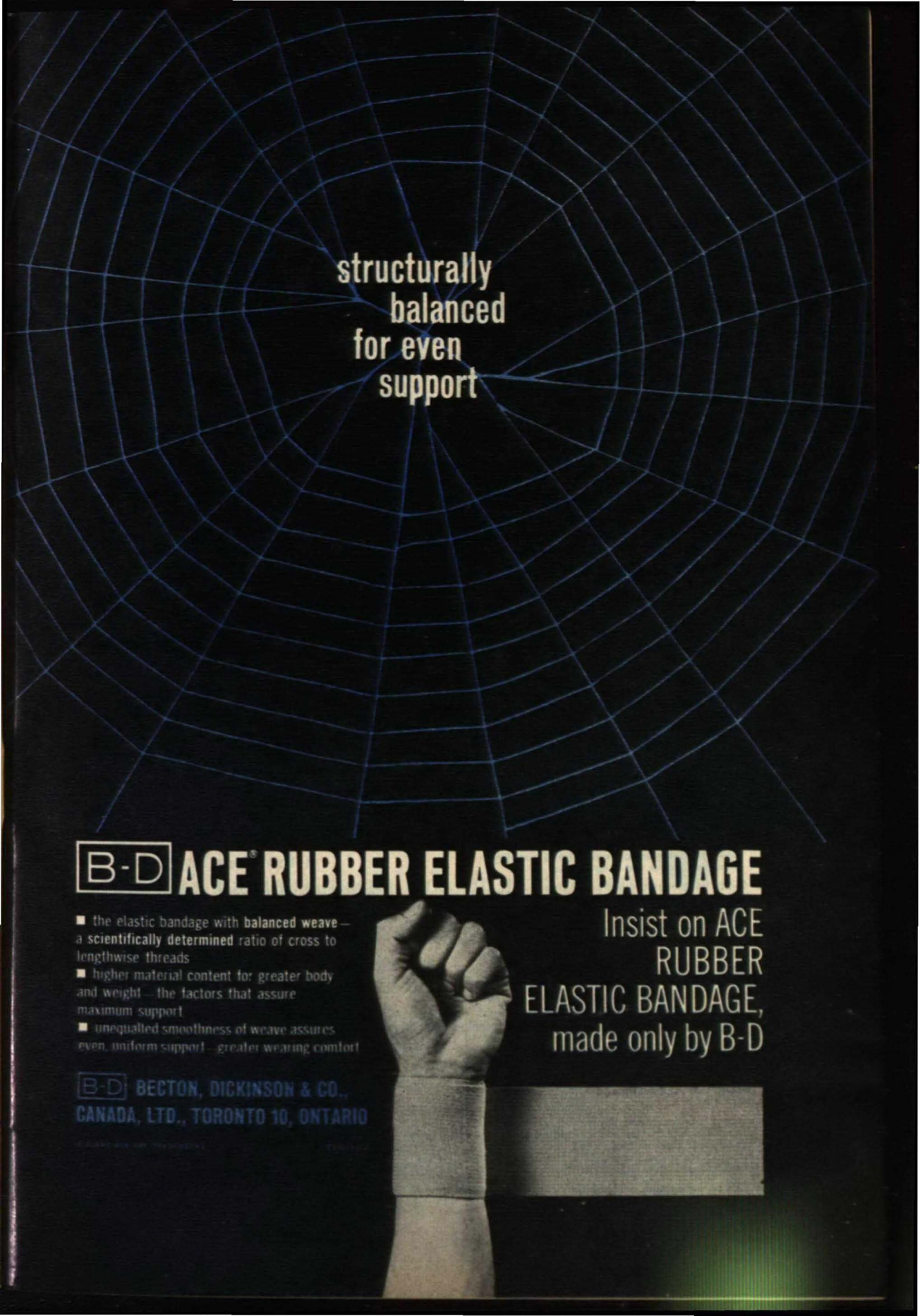

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Random Comment

Dear Editor:

Many of the changes which have taken place in *The Canadian Nurse* during the past year or so are excellent, and it is satisfying to see our journal steadily improving. Perhaps it is typical of readers to complacently accept all the improvements, and only to take pen in hand to complain. However, I am sure you realize that a person must feel very strongly about something before writing to complain.

Miss Anna K. Damon, British Columbia (Random Comments, July 1962 issue of our journal) echoes my greatest source of annoyance. Before reading any article it is always an advantage to know something about the author, and sometimes, while reading the article, one wishes to refer back to this information. It is, therefore, extremely annoying to be continually forced to re-locate the index, when a quick glance at the beginning of the author's paper would suffice.

In addition to this temporary annoyance, there is a stage at which nurses cannot possibly go on saving all old copies of this publication. Eventually, lack of space catches up with us all, and we are forced to extract articles of importance to us and dispense with the remainder of that issue. At this time it is even more important to have the author's biographical data closely associated with the article.

If this is not possible, would you please let us have your point of view?

(Mrs.) Gloria Kay, Ontario

★ *Readers are invited to express their opinions regarding this change.* Ed.

Dear Editor:

I have read the March 1961 issue of your magazine (series on Ophthalmology) with much interest. The articles are all well written and the statements clear and concise.

I would like to buy ten copies of this issue to use as source material for my graduate staff.

Cora L. Shaw,
Director, Nursing Service,
Eye Institute,
Columbia-Presbyterian Medical Center,
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THE CANADIAN NURSE

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BY THE CANADIAN NURSES' ASSOCIATION

VOLUME 58 MONTREAL, NOVEMBER 1962 NUMBER 11

MEET THE EXECUTIVE

One of the more exciting events of the closing hours of a biennal convention is the disclosure of election results when CNA members learn the names of those who will help to guide the activities of the association for the succeeding biennium. In the July issue, readers met the new president, Miss E. A. ELECTA MACLENNAN. The other members of the 1962-64 Executive Committee are introduced in this issue and, since they have, as a body, already reached prominence in the profession, many will be familiar figures to readers generally.

The first vice-president, ISOBEL MACLEOD, is no stranger to professional affairs on a national level. A member of the CNA Committee on Finance in former years and chairman of the Journal Board for six years, one of her present responsibilities will be chairmanship of the finance committee. Mrs. MacLeod is the busy director of nursing of The Montreal General Hospital.

KATHERINE MACLAGGAN, director of the School of Nursing, University of New Brunswick, is second vice-president. She,

(Gaby, Montreal)

ISOBEL MACLEOD

KATHERINE MACLAGGAN

too, has had past experience in CNA activities on the Committee of Nursing Education, as a member of the Journal Board and as chairman of the Committee on Nursing Affairs which replaced the Committee on Research. Miss MacLaggan is presently studying towards her doctorate as the recipient of the third Canadian Red Cross Fellowship for graduate nurses.

A widely-known and much-respected British-Columbia nurse is our third vice-president. EDNA ROSSITER is director of nursing, Shaughnessy Hospital, Vancouver and a past president of the RNABC. She is the new chairman for the Committee on Nursing Service.

ALICE GIRARD, the new dean of the Faculty of Nursing, University of Montreal, is the chairman of the Journal Board. She is a past president of the Canadian Nurses' Association and a member of the Royal Commission on Health Services for Canada.

(Geraldine Carpenter, Montreal)

ALICE GIRARD

EDNA ROSSITER

MARY RICHMOND from the faculty of the McGill School for Graduate Nurses will continue on the Executive as chairman of the Committee on Nursing Education.

JEAN LEWIS, president of the Association of Nurses of Newfoundland, has accepted the chairmanship of the Committee on Legislation.

Representing the nursing sisterhoods of the Atlantic provinces is SISTER HUGH TERESINA. Sister is director of nursing of St. Joseph's Hospital, Glace Bay, N. S.

The Quebec sisterhoods are capably rep-

(Chevrons Studio, Victoria)

MARY RICHMOND

SISTER HUGH TERESINA

resented by SISTER FLORENCE KEEGAN, Institut Marguerite d'Youville, Montreal. She was the representative for the past biennium also. Sister has always taken a very active role in professional affairs, provincially and nationally.

SISTER MARGARET MOONEY, who is presently completing her M.Sc. in Nursing at St. Louis University, Missouri, majoring in personnel work, is the representative for Ontario sisterhoods. She is the director of nursing of Hotel Dieu Hospital, Kingston. Sister has served as a member of the CNA Public Relations Committee in former years and on various RNAO committees.

(The Musical Clock, St. John's)

JEAN LEWIS

(Jac Guy, Montreal)

SISTER FLORENCE KEEGAN

SISTER MARGARET MOONEY

SISTER CECILE LECLERC

Sisterhoods of the Western provinces can count on SISTER CECILE LECLERC for excellent service on their behalf as a member of the Executive Committee. She is the director of nursing education, Holy Cross Hospital, Calgary. Sister has taken a very active part in the work of her provincial association. Most recently she contributed to the preparation of the Alberta Brief submitted to the Royal Commission on Health Services.

The Canadian Council on Nutrition has revised and re-named Canada's Food Rules. Henceforth they will be called *Canada's Food Guide*. In the revised text there is greater allowance for the flexibility of selection permetted by the variety of foods available in Canadian markets.

* * *

Anesthetists are running into trouble with patients who take tranquilizers regularly. They found a general anesthetic given to patients using tranquilizers causes a too-sharp drop in blood pressure and heart beat.

The chief offender is reserpine. It seems to deplete the body of a substance that normally stops the general anesthetic from slowing the heart too much.

The biggest hazard is during emergency operations when the anesthetist does not know the patient has been taking tranquilizers.

—*The Financial Post*, Dec. 16, 1961.

When a child loses first teeth prematurely, it may cause the second teeth to grow in crookedly unless dental care is given to prevent distortion of the jaw and tooth sockets. Youngsters should visit the dentist regularly from the age of three.

* * *

Though we travel the world over to find the beautiful, we must carry it with us or we find it not.

—RALPH WALDO EMERSON

* * *

People who are hard to please are often the most worth pleasing.

* * *

If a man does not make new acquaintances as he advances through life, he will soon find himself alone. A man, Sir, should keep his friendship *in constant repair*.

SAMUEL JOHNSON

* * *

When you are average, you are as close to the bottom as you are to the top.

NUTRITIONAL DISTURBANCES

PIERRE SENÉCAL, B.A., M.D., D.P.H.

This contribution makes some comments on nutritional disturbances[1] and the role of the doctor and nurse in preventing them.

When a new mother, leaving the hospital, takes charge of her first baby and at last puts on the clothes she has procured for him, she looks forward to a happy period of growth and development.

A good deal of this depends on nutrition. How much does she know about feeding the baby? We hope that our new mother, armed with *The Canadian Mother and Child,* fresh from her prenatal lectures, her hospital demonstrations, her instructions from the obstetrician, pediatrician and nurse has the required knowledge.

The reality can be quite different. At this point, in urban areas such as Montreal, 90-95 per cent of new mothers have placed the child on cow's milk: a nutritional disturbance from the use of natural breast milk. You say, perhaps, "Don't be dramatic. Artificial feeding is successful, and babies apparently thrive on it. It does not, as a rule, cause a real nutritional disturbance."

One wonders why the doctor and nurse have not succeeded in the educational task of motivating the mother to breast feed. This lack of success has many reasons: Ease of artificial feeding, modern cultural attitude of women, time required to educate the mother, etc. The breast feeding is only a facet of a complex situation which is based on the status of women in present-day society. Professor Bostock in his "Evolutional Approach to Infant Care"[2] introduces with wit the serious concept of external gestation. He feels that deep sleep, enuresis, asthma and allergy have their roots in the first half year of life, at a time when the rejection of the infant and unmotherliness have profound results on personality.

Be that as it may, there are babies who are disturbed by cow's milk and other foods as well. Simple allergy to cow's milk is rare and is said to be associated with edema of the intestines, cramps, mucus, frequent loose stools and possibly blood. Empirically, cure or improvement can be obtained by taking away the offending food — milk — and substituting soy bean milk. Recently, precipitins against cow's milk have been detected in human serum by means of agar-gel diffusion techniques.[3] In families with a strong allergic background it has been proposed that cow's milk be left out, and soy bean milk used from the start.[4]

The new mother, having in good faith decided not to breast feed, may in some cases proceed to overcompensate. She may feed the new baby "like my girl friend feeds her (older) baby." She enters into a competition. At the Well Baby Clinic it is not unusual to meet such a new baby who is already on whole fresh milk, cereal, vegetables, meat, fruits, etc. While many such babies appear to fare well, it is not known how many of them end up at the doctor's or hospital with digestive disturbances — vomiting, colic, diarrhea, eczema, etc.

The doctor and nurse would much prefer to have a chance to complete the education of the mother, to guide her in the gradual strengthening of the

formula and the progressive addition of solids. During this period, the importance of proper preparation, sterilization and refrigeration of the formula should be impressed upon the mother.

A simple plan for the first 6 to 9 months, is to introduce cereal — rice, barley, oatmeal before 2 months of age. At 2 months simple vegetables, at 3 months fruit and the other cereals if the skin is good. Egg yolk is given, if desired, at 4 to 5 months if there are no allergic manifestations. Cow's milk is at first diluted : 2 parts milk, 1 part water with sugar added to maintain 20 calories to the ounce; gradually this is raised to a full strength milk by 4 to 5 months of age, the sugar being reduced, then eliminated. Whole egg should not be given before 9 months. Meat and vegetable combinations can be used at 3 months and are less expensive than pure (canned) meat which need not be given before 9 months. Vitamins C and D are added at 2 to 3 weeks. A synthetic preparation may be used. In areas where there is no fluoride in the water this substance may be added by giving a vitamin preparation with fluoride. Dosage is discussed later.

This plan of feeding usually satisfies the baby and takes into account the fact that certain foods may give rise to disturbances, such as eczema; in case of known allergic background further delay can be allowed.

Our predecessors of 1900 knew about the high mortality of artificially fed babies. Five of them died for every breast fed one.[5] They solved the problem of artificial feeding by doing two things, which have been handed down to the present-day doctor and nurse :

1. They taught how to dilute cow's milk and add sugar to it so as to make it more like breast milk (less casein, more sugar).

2. They emphasized sterilization.

There is a trend now to look back and say of those two dicta, the more important one is sterilizing — "feed the baby sterilized whole cow's milk. He will do well." We prefer the more conservative way and keep the formula concept.

What does the new mother know about vitamins? When, in a city clinic, various mothers were asked about the vitamins needed by babies, more than 75 per cent did not know what vitamins were needed. When they mentioned a brand name 50 per cent did not know what vitamins were in the product. This is not to say that the baby does not get vitamins, but he gets what the mother is "told" to give. The doctor and nurse have a great opportunity to teach the mother the proper use of vitamins. They appreciate that repeated check-up on what a mother is doing is important.

At present, the daily recommended dosage for basic added vitamins[6] is as follows :

Vitamin C, 30 mgm. per day, administered as pure vitamin or two ounces of orange juice a day. Vitamin D, 400-800 I.U. per day until 1 year of age, then 400 I.U. daily. It is considered that breast and cow's milk have enough natural Vitamin A, thiamine, riboflavin and niacin for the first few months.

The routine use of multiple vitamin preparations containing Vitamins C, D, A, and, in addition, the B group, and even several minerals has no scientific basis, though such preparations may reassure the anxious mother at extra cost.

Mothers often report the use of orange juice and a vitamin preparation that has Vitamin C. Another variety of duplication is to give a prepared formula that has added vitamins and then repeat these unknowingly by the use of a vitamin preparation.

Thus doctor and nurse can, by checking the mother, prevent unnecessary expense and, possibly, exposure to too high a value of Vitamin D. Toxic effects can be produced by excessive intake of Vitamin D or Vitamin A.[7] Anorexia is an early symptom of hypervitaminosis D and can occur in some children at a level of 1,800 I.U. Toxicity is usually associated with higher dosage of 20,000 I.U. or more over a long period. Symptoms include nausea, headache, polyuria, nocturia and diarrhea. Pallor, lassitude are also common in young children. More specific are calcification of soft tissues, including the kidneys with consequent renal damage.

Toxic effects can also be produced by excessive Vitamin A. The basic requirements for Vitamin A vary from

1,500 I.U. for the infant to 5,000 I.U. for the adult. Hypervitaminosis A may be acute when more than 300,000 I.U. are absorbed by an infant. This results in nausea, vomiting and bulging fontanelle due to increase in intracranial pressure. Chronic hypervitaminosis A is associated with daily dosages above 25,000 I.U. over a long period. Initial manifestations are nonspecific — anorexia, pruritus, lack of weight gain. Later, irritability and, of interest to the clinician, limitation of motion and tender swelling of bones may occur. It is obvious that under no circumstances are mothers to increase vitamin doses for "tonic" effect, etc.

Recently, there have appeared articles from various parts of Canada reporting a rise in the incidence of scurvy.[8] In many instances this Vitamin C deficiency is accompanied by Vitamin D deficiency (rickets).[9]

The Newfoundland authors went into the expenses caused by the hospitalization of the victims of scurvy: 38 patients were in hospital 710 patient days, at a cost of $13,550, not including X-rays and transportation — all this because available orange juice concentrate was not used.

What do mothers in a city clinic know about fluoride? Unfortunately, our enquiry revealed that there was a profound lag in this area and that they knew next to nothing about the value of fluorides in the reduction of tooth decay.

The maintenance, whether natural or by careful addition of one part per million of fluoride to the water will reduce cavities in teeth by as much as 65 per cent.[10] It is by the joint effort of the doctor, nurse and dentist, that children and babies can have the benefit of fluoridation. When the parents know what is being achieved in such cities as Brantford, Ontario, and what the World Health Organization,[11] the Ontario Fluoridation Investigating Committee[12] recommends. then they will act and make their city administration take the proper action.

Where there is no fluoride in the water, what can the doctor, nurse, dentist, parents do to provide babies and children with this benefit? The answer is that the patient, under prescription takes either fluoride tablets (as described in the *Journal of the American Dental Association*)[13] or a simple vitamin preparation containing Vitamin C, Vitamin D, possibly A and 1.0 mg. of fluorine. What about possible toxicity? The Nutrition Committee of the Canadian Pediatric Society stated in its 1961 annual report:

> In regard to the content of fluorine in some multi-vitamin preparations in Canada, the view was expressed and the recommendation made that this product should be available only on prescription and a warning should be forwarded for publication in provincial and national medical journals concerning the use of these products in areas where the water is already fluoridated.

It is obvious that fluorides should not be given in a city where the water is fluoridated. It is recommended that all preparations have a warning to that effect, and also be labelled: "Keep away from children."

Acute toxicity from excess ingestion can be avoided by prescribing a small supply at a time. Small children have been known to take 80 to 200 milligrams a day for several months without toxicity[14] so that acute ingestion of considerable excess tablets can occur without recourse to gastric lavage.

Some Nutritional Problems

Diarrhea, vomiting, hiccoughs and constipation may be regarded as humble problems but they may herald serious disease. They should be watched by the doctor and the nurse.

Diarrhea: The breast fed baby is protected against many digestive disturbances including the bacterial diarrheas. Occasionally, such a baby will have spells of looser, possibly green, stools. This is often of little significance and can be corrected by giving a little boiled cow's milk!! Simple, non-bacterial diarrhea in the artificially fed baby can often be managed by reducing sugar and the strength of the milk with water.

Acute, severe diarrhea in a baby can be very serious. It rapidly endangers life through loss of water and electrolytes. Such cases require rehydration in hospital under careful isolation technique.[1] Where babies or older children are grouped together — in nurseries, institutions, hospitals — they

are subject to epidemic diarrhea which can be avoided only if the doctor and nurse keep an eye open and are generous with culture of stools and isolation. The etiology can be viral or bacterial, and includes the stubborn pathogenic *E. Coli* strains which can be typed by commercial sera.

Chronic diarrhea[15] is uncommon. It may develop at 6 to 12 months of age. Eventually, the patient shows a picture of chronic nutritional failure which is related to malabsorption of food, hence the general name, "Malabsorption Syndrome" or Primary or Secondary Celiac Syndrome. The various forms of celiac disease share in common the presence of excessive fat in the stool (steatorrhea), with varying losses of other nutrients including vitamins and minerals. The primary celiac syndrome group includes fibrocystic disease of the pancreas with its inadequate pancreatic enzymes, gluten intolerance, starch intolerance of Andersen and an idiopathic group. Fibrocystic disease of the pancreas, (better called mucoviscidosis) is due to a disturbance of the glands that make mucus, thus affecting the pancreas, the lungs, the liver, the salivary glands, etc. The mucus is unusually thick and leads to damage of the gland by inspissation, obstruction and fibrosis; the sweat also contains an abnormally high quantity of sodium, potassium and chloride.

Mucoviscidosis is usually severe enough that life is endangered, even though the digestive part can be corrected by the addition of the missing pancreatic enzymes and a proper diet. The lung damage leads to repeated staphylococcal pneumonias, pulmonary fibrosis and eventually terminal respiratory inadequacy. The other primary group can be managed by diet, avoiding the offending substances, the idiopathic group being managed by the standard low fat and low starch diet. Andersen and Di Sant'Agnese in their follow-up of celiac children have shown persistent but minor disturbances in gastrointestinal absorption which persist into adult life, thus linking the celiac syndrome with the malabsorption syndrome of the adult.

The Secondary Celiac Syndrome is not directly nutritional in origin. The malabsorption is due to other mechanisms such as infection with Giardia (to the fore recently), tuberculosis, accidental shortening of the bowel absorption surface by error in anastomosis, etc.

Hiccoughs : These occur mainly in young infants and are not very significant. They perplex the father who feeds the baby and who then feels his wife would do a better job. Holding the baby to permit a "burp" or giving a small amount of warm water may help. Hiccoughs do not harm the baby and usually only last a few weeks.

Vomiting : The new mother who sees the baby spitting up with a "burp", or regurgitating, may think that the baby is vomiting in a harmful way. The doctor and the nursery nurse who are watching the baby closely can reassure her on the normality of this. Habitual spitting up may occur and can last until one year of age. It is harmless.

In the first few hours of life the doctor and the nurse watch for vomiting as a sign of alimentary tract anomaly, such as esophageal atresia, bowel obstruction, etc., which require prompt diagnostic procedures and surgical intervention, if present. Green vomitus suggests obstruction below the pylorus. Of special significance is the vomiting that occurs in duodenal obstruction above the Ampulla of Vater — the vomitus is not green and unless x-ray of the abdomen is made to demonstrate the absence of bowel gas, delay may be fatal. The projectile vomiting of pyloric stenosis establishes itself gradually by two or three weeks of age. At nine months and older acute intussusception may be the cause.

Constipation : New parents are always intrigued by the red face and grunting of the normal baby during evacuation of the bowel. As a rule, constipation is not a big problem except in the mind of the mother who is affected with the condition and projects her own emotions on to the child. The breast fed child, at times, has infrequent soft movements at intervals of four to five days and may be helped occasionally by digital dilation if necessary. Rabbity movements that are often seen are also normal. Other mothers report daily movements — "but they are hard, constipated." To quote Holt: "What changes should be made in the food for chronic constipation ? Nothing should be done if the child has a good movement daily."[16]

It is always wise to check the anus, especially if the mother reports blood with the stool. Anal fissures are frequent, painful and contribute to constipation. Anal narrowing, due to a skin ring is rare though the mother may report ribbon stool. The

megacolon of Hirschsprung's disease is not present at birth, but inability to pass stool may be present and the constipation of this disease will develop gradually. At two years, or at any rate when bowel training is being imposed on a child, there is possibility that emotional problems get attached to the normal evacuation situation. This can result in constipation, soiling, and a condition of psychogenic megacolon.

Nutritional Problems in the Hospital

The baby or child entering the community of the hospital is doing so because of some illness or surgical problem. He is being placed in a different milieu with total strangers. Stimulated by the work of Spitz[17] and Bowlby,[18] the doctor and nurse are especially aware of the psychological and emotional needs of the child entering hospital and the value of visits by the parents. When they do not come often, the doctor and the nurse have to try to replace the father and mother. This applies especially to the nurse who spends a good deal of time feeding, diapering, treating. Incidentally, this also means three mothers per 24 hours ! The use of a special questionnaire*, designed to inform the hospital staff of the habits of the little patient in the eating, elimination and play areas, is very reassuring to the mother who is leaving the child and gives opportunity for the doctor and nurse to act in an informed manner. Visiting and feeding of the young child by his parents is to be encouraged. The questionnaire, when backed by the general interest of the nurses, leads to a much more pleasant work and treatment situation for all, lessens emotional problems, decreases vomiting, constipation, diarrhea and refusal to eat with consequent wastage of food.

* A mimeographed copy of the questionnaire used at Montreal Children's Hospital may be secured by writing to the *Journal* office.

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IN MEMORIAM

Muriel Archibald (Toronto General Hospital '30) died in Fredericton, N. B. on October 12, 1962. In 1948 Miss Archibald joined the staff of National Office. Two years later she became the first full-time secretary-registrar and school of nursing advisor of the Association of Nurses of Prince Edward Island. In 1955 she was appointed to the position of executive-secretary of the New Brunswick Association of Registered Nurses — the position she held at the time of her death.

Nursing Care in Nutritional Disturbances

CATHERINE E. PILLEY

Teaching points the nurse should observe in caring for these conditions.

Diarrhea

Diarrhea requires very good nursing care. It can have serious results in infants and is contagious. While in hospital, children of all ages troubled by this condition should be isolated.

If the diarrhea is severe, the doctor will most probably order all feedings by mouth to be stopped and fluids to be given by the intravenous route, especially if dehydration is present.

It is necessary that the correct amount of intravenous solution be given as too much fluid may lead to serious results, especially in small babies.

While a child is receiving intravenous therapy it is necessary to restrain him — therefore he must receive extra care and attention.

Careful charting is very important. The number, amount, consistency and color of stools should be noted — also whether or not vomiting is present and the amount of fluid taken by mouth or intravenously.

Feeding is resumed gradually, starting with water or glucose solution, and working up through weakened formula to full strength feedings. Solid foods are reinstated as the condition disappears.

The parents need constant reassuring, and must be encouraged to visit their child as much as possible.

Constipation

In caring for a child with constipation we must constantly employ patience and kindness. Regular times for defecation should be set aside each day. Usually, after breakfast is a good time. The child should sit comfortably on the toilet, potty or training chair, with both feet firmly on the floor.

We should not force or scold him if his efforts are unsuccessful — but should praise him if he achieves a satisfactory result. Striving for a movement should be done without upsetting the child. If he becomes upset it is as well to stop trying for the time being. Too rigid an enforcement of toilet training can result in constipation.

A very important point is diet. This should include plenty of bulky foods, green vegetables and fruits, especially rhubarb and prunes. Laxatives should not be given regularly as they encourage the bowel to be lazy. Enemas and suppositories are occasionally used to relieve difficult situations, but they also should not be used regularly.

The mother should be taught how to handle her child, with plenty of stress on the need for patience and understanding.

Vomiting

The nurse should watch the infant carefully to note the type and character of vomiting, also the time in relation to food intake.

Nursing care should be arranged in such a way as to eliminate the moving or handling of the baby following his feedings. Treatments leading to stress should not be done immediately prior to or following feedings.

When feeding the child, the food should be warm and given slowly. Care should be taken to "burp" the baby once during and after the feeding. Following his feedings, the baby should be placed on its right side. The head of the bed may be raised.

It may be necessary to give skimmed or partly skimmed milk, or to cut out solid foods during acute attacks of vomiting. Thickened formulas are sometimes used.

Accurate charting is of the utmost importance — the estimated amount of vomitus, the time, the color, consistency, odor and character — all should be noted. These points will give the doctor an idea whether the vomiting is due to some organic disease or whether it is due to emotional problems or faulty feeding.

The nurse should establish a good relationship with the mother as she can be of great value in helping the mother if this problem of vomiting should be due to lack of affection or faulty methods of feeding.

Hiccoughs

Hiccoughs occur mainly in infants, some of whom have a tendency towards it. It is not of much significance.

A baby who has hiccoughs should be held up to "burp" and may be given a small drink of warm water slowly. Care should be taken to give the feedings slowly, but not so slowly that the baby swallows air. A nipple with a medium hole should be used and care taken to "burp" the baby sufficiently often.

Hiccoughing rarely occurs in children other than bottle fed babies. If it does start the older child should be told to drink a glass of water slowly.

Eczema, Asthma

Children with eczema and asthma may be treated essentially the same, as the two conditions are akin and are usually brought on by the same cause. Eczema is more common in children under two years of age. This often turns to asthma in older childhood.

Allergy tests may show allergies to certain foods or substances. These foods should be omitted from the diet and the mother shown how she can provide an adequate diet without them.

Because these complaints have a psychological association, these little patients need special understanding and care. They must be treated in a very kindly but firm manner. They should be encouraged to play with other children and should not have too much extra attention. They should be shown they are part of a group of loved and cared for children. The older child may be taught the reason for his attacks, and be helped to overcome them.

The relationship between parents and nurse is very important as the mother needs reassurance and understanding in helping her to care for her child with these complaints.

Yogurt is a cultured milk, usually whole milk evaporated to two-thirds of its original volume. It has the same nutritive value as the milk from which it is made. Commercial yogurt has the same caloric, vitamin and calcium content as regular whole milk. Commercial yogurt is an expensive form of milk.

—*Canadian Hospital, Vol. 39, No. 5*

In the interests of science, 1300 students at the University of Michigan have been eating an apple a day for three years. Now the scientists report that these students suffered from fewer illnesses than the rest of the student body, and had one-third fewer respiratory infections.

—Consumers' Association of Canada.

DIABETES IN CHILDHOOD

MIMI M. BELMONTE, M.D., C.M., F.R.C.P. (C)

Parental self-discipline is one of the keys to a normal life for the diabetic child.

This disease, which is so common in middle age (two per cent of the population) and relatively common in children under 15 years of age (five per cent of all diabetics), is very rare in infants. To my knowledge, only one case of true diabetes in a child under six months of age has been reported in the medical journals. From the eighth month through the second year cases are less rare. Childhood diabetes usually occurs during periods of rapid growth such as during the seventh and eighth years and adolescence.

In the early stages of the disease the symptoms are classical and appear suddenly in a child in apparent good health. They reflect quite clearly the physiological state caused by insufficient insulin. The body is incapable of utilizing foods and the child ceases to grow, becomes thin and lacks energy. The unused sugar accumulates in the blood eventually appearing in the urine. *(Figure 1.)* This phenomenon results in an increasingly marked polyuria. The child who no longer wets his bed, begins to do so again.

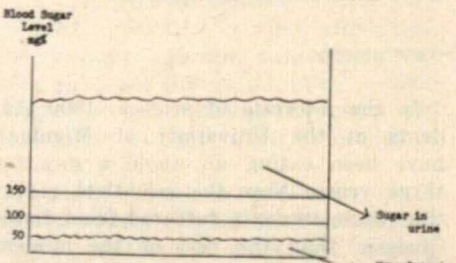

Figure 1
An elevated blood sugar causes glycosuria.
A low blood sugar produces hypoglycemia.

An older child has to keep getting up at night to urinate. The polyuria is accompanied by tissue dehydration that causes excessive thirst. The child is therefore always going to the bathroom. At this point, the parents usually become suspicious and consult their doctor. If they do not the child's condition becomes aggravated — dehydration increases, acidosis occurs, the respirations are frequent, deep and regular, the breath has a strong odor of fruit, characteristic of the presence of acetone. The little patient goes into diabetic coma — he vomits, his abdomen is painful and rigid, his unconsciousness deepens. He now needs specific care under the supervision of doctors and nurses in the hospital.

These symptoms develop rapidly leading to diabetic coma in two to six weeks. Insulin and intravenous fluids given at this time will restore the child to health, but the real task follows. The diabetic child is suffering from a chronic illness for which there is no cure at present. Only insulin, an appropriate diet and frequent urinalyses will permit maintenance of good health.

It is imperative that the diabetic child and his family fully understand the disease and its treatment. The parents must be helped to accept the fact that their child is suffering from a chronic illness the control of which requires deprivations on their part as

well as the child's. The restrictions are usually accepted when the parents understand the diabetic's problems. The moral support of the doctor, nurse, dietititian and social worker will help the new diabetic and his parents to submit to the exigencies of the disease and accept them as necessary for the child's health, rather than as a series of boring regulations. We must never forget that before the discovery of insulin in 1922 every diabetic child died!

The quantity of insulin that the patient's pancreas should secrete automatically at each meal, is administered by subcutaneous injection. It enters the circulation gradually during the course of the day to permit the body to utilize food. *(Figure 3)* It lowers the level of sugar in the blood. As long as the patient eats regularly everything is fine. If he misses a meal the insulin continues to lower the blood sugar level, causing it to fall below normal. The patient then displays symptoms of a "reaction" or hypoglycemia. *(Figure 1.)* Agitation with changes in temperament, hunger, visual difficulties, and cold perspiration are the classical signs of hypoglycemia. The child, his family, teachers and close friends, should learn to recognize these signs so that the patient may be given sugar immediately. Following a diet carefully is one means of preventing reactions.

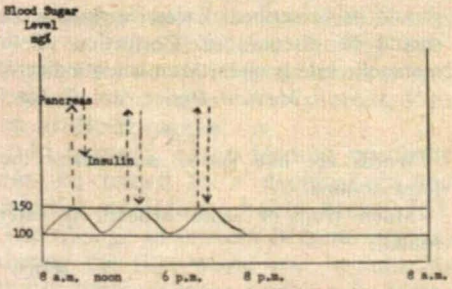

Figure 2
Automatic blood sugar control in non-diabetic.

A diabetic may also develop hypoglycemia following intense physical activity. Exercise is excellent but additional insulin must be given to burn the sugar more rapidly. The diabetic person who wishes to exercise should understand its effects. He can protect himself against a sudden fall in his blood sugar by eating properly before and after the exercise. An athlete, in competitive sports, may lower his dose of insulin on those days when he will be very active.

The dose of insulin tends to vary somewhat from day to day. A slight increase in the amount of food eaten, daily variations in physical activity, the presence of infection (which increases the insulin requirement) and mood changes (because of their effect on the nervous system and on some glands) are factors which affect the amount of insulin required.

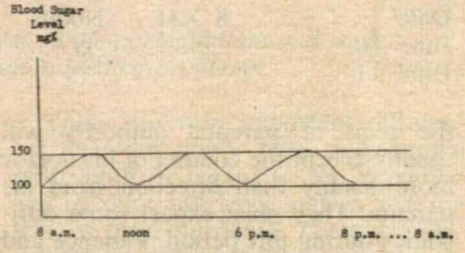

Figure 3
Control of blood sugar by insulin injection

This dosage can be adjusted correctly by testing the urine frequently for the presence of sugar. If there is any doubt, the parents may consult the doctor who will be guided by the results of the urinalyses that have been recorded.

What can a young diabetic do to stay healthy? *(Figures 2 & 3)*

1. Give himself the amount of insulin he needs.

2. Examine his urine for sugar three or four times a day. The results will guide him in determining the dosage of insulin. An easy method of recording the results is shown in *Figure 4*. These entries should be made with colored pencil in a small notebook. This will be a valuable permanent record for the doctor.

3. Follow a diet of sufficient calories to permit normal growth. The daily intake should be divided into several meals so that the blood sugar will remain normal throughout the day.

4. Protect himself from hypoglycemia by increasing his diet or decreasing his insulin at times of vigorous exercise.

5. Increase his dose of insulin during an infection if his urinalyses indicate the presence of sugar and, more important, acetone.

Who will assume all these responsibilities? Depending on the age of the child the parents will exercise a greater

or a lesser degree of control.

As soon as possible the child should learn to care for himself. He can learn to test his urine at the age of six, to give his insulin between seven and nine, and understand his diet by the time he is nine or ten. Between the ages of twelve and fourteen he will be able to share full responsibility for his care with his doctor. The adolescent who is attempting to throw off the reins of parental authority will usually accept the counsel of his doctor more readily than direction from his parents. They must expect some difficulties during this period. Patience and acceptance of the fact that the teenager must learn by experience, even though it is costly at times, are much more valuable than demanding unquestioning obedience which they will not receive much of the time.

Finally, the diabetic child should not be considered ill. With a well-controlled diet he can enjoy excellent health and be encouraged to participate fully in the activities of his age group. Despite the fact that diabetes is a disease that demands attention, he should not be permitted to use his affliction as an excuse for neglecting his studies or avoiding household tasks that are usual for a child of his age. The demands of diabetes are sufficiently exacting that only a well-disciplined person is capable of responding to them with complete success. Prejudice still exists which may make it difficult for the diabetic to find employment. While being understanding and loving, it is important for the parents to be firm. They must prevent the child from using his illness to exploit them and others. Life will be more difficult for him in later years if they have been indulgent.

Figure 4. Record of Urinalyses

Date	8 A.M.	Noon	5 P.M.	8 P.M.	Reaction	Insulin
June 10	bl.	gr.	bl.	or.	11.15 A.M.	10 CZI
June 11						30 NPH

In Menière's disease there are consistent findings of dilatation of the endolymphatic duct of the inner ear on the affected side. The etiology of the increased production or decreased resorption of endolymph remains obscure. Allergic symptoms are found in about 10 per cent of patients; in a further 10 per cent there is deficiency of thyroid metabolism. Nerve deafness may exist, and suppurative ear disease and otosclerosis are conditions on which Menière's disease may be superimposed. In more than half the cases observed the cause remains undetermined. The relationship to periods of stress or emotional upset, together with an apparent increase in incidence, suggests a connection with the stress syndrome. It is suspected that stress is related to vasomotor control of the blood vessels of the stria vascularis in the cochlea where endolymph is produced.

There is no specific curative treatment. Symptoms can be alleviated and attempts made to remove possible etiological factors. Vestibular depressants (Dramamine, Bonamine, Thorazine) are used for acute vertiginous episodes. Cigarette smoking should be forbidden. A low sodium diet, combined with the administration of potassium chloride to help eliminate excessive sodium, should be prescribed. Excessive fluid intake should be discouraged. Correction of the metabolic rate is undertaken when indicated.

Medical Digest, Vol. 7, No. 7

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Words are like leaves; and where they most abound,

Much fruit of sense beneath is rarely found.

POPE

* * *

It (a pun) is a pistol let off in the ear; not a feather to tickle the intellect.

CHARLES LAMB

* * *

There is little friendship in the world, and least of all between equals.

FRANCIS BACON

* * *

Genius is formed in quiet, character in the stream of human life.

Problems in Infant Feeding

ALBERT ROYER, M.D., F.R.C.P. (C)

A discussion of the nutritional needs of the normal infant and some practical advice on common feeding problems.

Before discussing specific feeding problems, it is necessary to distinguish between the branch of pediatrics that deals primarily with sick children and the branch that is only interested in well children. The latter is concerned with the means and methods of preventing disease and encouraging normal development. Feeding is one of these means.

It could be said that in dealing with well babies there are no feeding problems except those created by the parents or their substitutes. The normal newborn or older infant, who is given a diet which he can absorb according to his needs, develops normally and has no feeding problems. An infant is a young animal; left to his instinctive drives, he will manage just as well as a puppy, colt or other animal. It is well to remember that feeding problems only occur in those humans and animals who have been submitted to an artificial regime.

In humans, many feeding problems can be traced to a decrease in the number of infants being breast fed. The change in custom became general during the first world war because so many mothers were working in factories. Prior to the war, artificial feeding was used only if the mother died or was ill; in those instances a wet nurse fed the child which, at least, provided human milk. This is what we do today in the dairy industry. Calves are separated from their mothers so that commercial production can be maintained, but they are fed skimmed cow's milk, not milk of another species of animal.

There are very important differences between cow's milk and human milk, both in regard to the percentages of their nutrients and in the nature of these nutrients. There are also significant differences between the digestive juices of a human infant and a calf — differences that are related to the composition of the respective maternal milk.

Physiologically, there is no doubt that human milk alone is ideal for an infant. Repeated modifications of cow's milk have been moderately successful in producing a product comparable to mother's milk but we must then cope with the mechanical aspects of feeding. With breast feeding there are no problems in relation to composition, temperature or sterility. Availability of supply is comparatively assured. Women who cannot nurse their infants are few, provided they really want to and are in a social and psychological atmosphere that is conducive to breast feeding. The technical problems of artificial feeding are numerous. Control must be exercised over the preparation of the formula, its composition and temperature, the size of the hole in the nipple, and so forth. However, these problems are less important than determination of the feeding schedule, the quantity, and the length of each feeding.

The breast-fed infant is nursed when he is hungry and for as long as he wants, without regard to quantity. This is physiologically sound, and from a psychological point of view, excellent. Artificial feeding aims at imitating this pattern, but in practice this is not

exactly what happens. Too often the mother becomes a clock-watcher, afraid that a feeding may be one minute late. She even wakens the baby during the night to give him his bottle. If he does not drink well as a result of being disturbed from a sound sleep, she becomes anxious. From this moment on all kinds of digestive troubles may appear. Frequently mothers are inflexible regarding the quantity the child takes, especially if it is less than the doctor has recommended or less than he usually takes.

Even though breast feeding is the method of choice, it is possible to nourish a child adequately by bottle. The cow's milk formula should approximate mother's milk as closely as possible and should be given according to the baby's needs and desires. In other words, the dietary regime should be adapted to the baby. The baby should not be forced to adapt to whatever diet his mother or his doctor think best for him.

Another important problem is overfeeding, both qualitatively and quantitatively. In every country of the world, except North America and some European areas, the biggest problem is malnutrition, either partial or complete. In these countries, many children die of hunger or diseases that are caused by qualitative nutritional deficiency. This happens only rarely in our country and usually is associated with serious digestive pathology.

Our greatest problem is quantitative overfeeding. From birth, throughout infancy and the preschool period and sometimes even during the school-age period, the majority of mothers become upset because they think that their children do not eat enough. This stems from ignorance of the laws of growth and of the physiological nutritional needs of children. Unfortunately, this lack of knowledge extends in varying degrees, to doctors and paramedical personnel.

At birth a normal infant should weigh between five and a half and ten pounds. The average weight for girls is seven pounds six ounces, for boys seven pounds eight ounces. The birth weight should be doubled by the fourth or fifth month, tripled at the end of the first year, quadrupled at two and a half years of age and quintupled when the child is four years and three months. It is not good physiologically for a child's weight to exceed these norms of growth by more than 10 per cent. If the excess weight is 15 per cent or more he will suffer from obesity in the same way as an adult. Recent studies have demonstrated that the majority of cases of adult obesity have a history of childhood obesity. The cause could be attributed to poor eating habits acquired during childhood and not corrected permanently before adolescence.

Study of the growth curve reveals that the rate of growth slows after the first few months and especially after the age of two years. It is normal, then, for a child's appetite to decrease during the preschool period. The mother who is unacquainted with this fact tends to panic when the child eats less than formerly. Too often she either forces or attempts to coax the child into eating more than he really needs. Both approaches lead to digestive and psychological upsets and, generally speaking, represent wasted effort since the child does not usually eat any more than before.

There is only one good rule for child feeding — offer an adequate diet at regular intervals. If he eats well, so much the better. If he does not eat his meal adequately, avoid fussing over him; do not offer substitutes; withhold cookies, candy or milk between meals. When he is hungry, he will eat as much as he needs.

There is also a problem caused by qualitative overfeeding. This is especially true in relation to vitamins, fruit and meat. There is no advantage in giving more than the normal requirement of each nutrient and it can even be harmfull to exceed it as, for example, in overdosage of Vitamin D.

The only significant problems of malnutrition that we encounter are qualitative and due to a lack of vitamins D and C, or iron. These deficiencies cause rickets, scurvy and nutritional hypochronic anemia, respectively. The latter occurs by far the most frequently and sometimes is seen in a very severe form. It is usually due to an abuse of the use of milk in the diet of young children to the exclusion

of foods rich in iron such as egg yolk and meat.

Children of one or two years of age, or even older may have been fed exclusively, or almost exclusively, by bottle. The reason offered by the mothers is always the same: "I give him milk when he wants it because he does not want to eat or cannot eat and he has to have something."

The real reason, however, is that milk satisfies his caloric needs, and the child will not take the trouble to eat. Moreover, children feel a certain enjoyment in sucking and will not readily relinquish this if, in exchange, they have to make the effort to chew.

The lack of vitamin D and C is mostly due to the parents' ignorance and to neglect on the part of medical and public health personnel to teach parents the benefits of these vitamins and to tell them of the foods and pharmaceutical products in which they are found.

These three forms of malnutrition should not exist in our country where all kinds of foods are in abundance. More interest in this problem must be taken and with a program of public education, there is no doubt that the problem of malnutrition will disappear.

IN THE GOOD OLD DAYS

(The Canadian Nurse — NOVEMBER, 1922)

One essential in keeping the operating room clean is to prevent, as far as possible, the entrance of dust and dirt from outiside. In order to effect this, all windows that connect directly or indirectly with the operating room should be screened with fine wire; ventilators intended for the admission of air should be covered with six thicknesses of second grade gauze and changed twice a week.

* * *

The trained attendant first made her appearance in Boston under the name of The Household Nursing Association, in 1912, but it was not until 1918 that a definite course of training was established.

* * *

Now that every province in Canada has registration laws of various degrees of value to the nurse and the community, much stress might and should be laid on the value to the individual nurse in being able to place the letters showing her registration after her name... Every means should be used to persuade hospitals, organizations employing nurses, and specially the nurses' registries owned by the nurses, to insist on the applicants for positions or work having this qualification.

There seems to be a prevalent idea that the patient should not be permitted to see the operating theatre at the time of operation, although the great majority of patients express a desire to see it... The modern operating room is attractive and clean, and it can do no harm to let the patient see this for himself. It is certainly more reasonable than to surround the place with such an air of mystery that he is led to believe it such a horrible sight that he cannot be taken there until he is asleep.

Certain principles of leadership apply to all sorts of leaders; these include, but are not made up exclusively of: intelligence, initiative, courage, and knowledge about human nature. The personality of the leader does not consist in the possession of a number of independent qualities, but in the fusion of desirable traits in face of a social situation.

—*Royal Bank of Canada Monthly Letter*, Vol. 43, No. 2

* * *

The secret of the arts is to correct nature.

VOLTAIRE

CYSTIC FIBROSIS

RUTH WILLIAMS, B.SC.N.

Cystic fibrosis, commonly referred to as C.F., is also known as fibrocystic disease, mucoviscidosis or cystic fibrosis of the pancreas.

This is the story of Betty who lived for seven months, one week and four days. She was the first child of Canadian parents, 24-year old Fred, and Donna who had just turned 18. Although calculated to be a full-term baby, Betty weighed 4 lbs. 14 oz. at birth and remained in the hospital nursery for two weeks after her mother was discharged. Her progress was slow, but when her weight reached five pounds she was allowed to go home. It later became known that she had cystic fibrosis, a malady which made her existence uncomfortable, kept her from thriving, baffled her parents and obscured a diagnosis.

Predisposing Factors and Incidence

Cystic fibrosis is a generalized disorder of unknown etiology which affects many, and sometimes all, of the exocrine glands. Before the advent of antibiotics, it was considered fatal at an early age. The disease, which is both hereditary and congenital, is thought to be inherited from both parents as a Mendelian recessive character. There are estimates, although no accurate statistics are available, that 1 in 600 to 1 in 1,000 live births will exhibit symptoms of this condition; and further, that 5-15 per cent of the general population carry the gene which is responsible for cystic fibrosis. Both parents must be carriers, but neither the age of the mother at the time of the child's birth, nor the birth order of the children is a factor. The probabilities are 25 per cent that any one child will have the disease, and 50 per cent that he will be a carrier. The sexes are equally affected. The disease is geographically wide-spread, although rare in Negro and Oriental children.

In the past, cystic fibrosis was thought to occur only in infants and young children. It is now recognized in the teenage group and has been diagnosed in a small number of adults.

Pathology

The disease produces a widespread involvement of the mucus-secreting glands. Instead of the usual thin, clear mucus, they produce a thick, sticky material, which accumulates and obstructs normal function. The main symptoms are demonstrated by pulmonary disturbances, pancreatic insufficiency and sweat gland involvement. The degree of involvement of these structures varies, causing the disease to be manifested in different ways and with different degrees of severity.

Meconium ileus, the earliest possible clinical disturbance, may be present at birth. It occurs when the viscosity of the secretion of the intestinal tract is so marked that the gummy intestinal contents are unable to pass through. Obstruction of the ducts of the pancreas by thick secretion blocks off the passage of important digestive enzymes and leads to abnormality of the stool and nutritional failure.

Most important is the effect of the thick bronchial mucus within the lungs. The abnormal viscid mucus contributes to obstruction and chronic infection, causing persistent coughing, lung scarring and ineffective breathing. Progressive changes lead to fibrosis which, in

turn, may interfere with the circulation of the blood through the lungs and result in heart failure. Children who die of this disease usually succumb to the immediate or remote effects of pulmonary disease.

Cystic fibrosis has been confused with a variety of diseases. It has been diagnosed as chronic bronchitis, asthma bronchopneumonia, allergy, pertussis, tuberculosis and celiac disease.

Betty's Symptoms

After she had been home for less than a week, Betty was brought back to the hospital. Her mother said that she had diarrhea and vomiting. At the end of a 10-day stay, the final diagnosis was "acute gastroenteritis."

At the end of another week at home she was readmitted with a "cold and cough." This period of hospitalization lasted 27 days. At various times hospital personnel described the baby as follows: "has difficulty in breathing; shows evidence of aspiration; takes feedings well; has considerable mucus; becomes cyanotic; peculiar odor to stool; harsh, deep cough; skin appears dusky." She made no improvement, in fact she lost weight. She had been treated symptomatically with aspirin, antibiotics, a croupette, postural drainage and various changes of formulae.

The final diagnosis made by pediatrician and general practitioner was bronchitis and aspiration atelectasis. The chest x-ray report read "features of bronchopneumonia and indications of irritation from aspiration." Betty was transferred, in poor condition, to a children's hospital.

General Symptoms

The symptoms of meconium ileus appear within hours or a few days after birth. These include vomiting, abdominal distress, and failure to pass meconium. Treatment consists of irrigation of the obstructed lower ileum and, usually, resection of the portion containing the thick mass of meconium. The immediate mortality from the latter procedure is high.

Symptoms showing insufficiency of pancreatic enzymes are more insidious; their onset is usually noted within the first six months. The stools tend to be abnormally large in volume, have an offensive odor and contain undigested fat. These infants have good appetites — some appear ravenous. In spite of an adequate food intake, there is retardation of growth, emaciation and a protruding abdomen. Rectal prolapse is a common complication due to the absence of the normal fat deposits around the rectum.

Pulmonary symptoms may arise spontaneously or occur after an acute respiratory infection. Chronic bronchitis, wheeze and chronic cough result from the difficulty in expelling the thick, tenacious mucus. In the later stages, clubbing of the fingers and chronic cyanosis appear; the chest may become barrel-shaped. During the process of fibrosis of the lungs the heart enlarges and the patient becomes dyspneic and edematous.

Abnormal functioning of the sweat glands produces excessive sweating. There is a high concentration of salt in the sweat, tears and saliva, so that during hot, humid weather complications may arise due to salt depletion and dehydration. A child may show weakness, listlessness, or collapse from heat prostration. Severe dehydration increases the viscosity of the bronchial secretions causing further distress in breathing.

Diagnosis and Clinical Tests

The diagnosis is usually suspected in infancy as the result of a clinical picture of low-grade diarrhea, good appetite with failure to gain weight, and cough. It can be confirmed by proving a high concentration of sodium and chloride in the sweat and by demonstrating the absence or reduction of pancreatic enzymes. For practical purposes, the pancreatic fluid need only be tested for absence or presence of trypsin.

A screening test consists of placing the patient's hand on an agar plate. If the salt concentration of the sweat is elevated, the plate will show whitish fingerprints due to the chemical reaction of sweat chloride with the silver nitrate and potassium chromate in the agar. A positive result indicates the need for further diagnostic tests.

A reliable test in an infant over six weeks of age is the sweat electrolyte test. Sweat glands may be stimulated by the subcutaneous injection of a parasympathomimetic, such as betha-

nechol chloride. Following the injection, soft gauze pads are attached to the skin with tape. When they have absorbed the sweat it is tested for its sodium chloride concentration.

Another method used to induce sweating is to place the child, all but his head, in a plastic bag and wrap him in blankets. When he begins to sweat profusely, the liquid is collected in small test tubes. The normal sweat chloride concentration is 1-50 mEq per litre, while that for cystic fibrosis patients is approximately 50-160 mEq per litre.

An older and more difficult test is carried out by duodenal intubation to obtain trypsin. A lubricated catheter is introduced into the duodenum via the nose and stomach. Care must be taken in placing the tube to ensure the collection of duodenal rather than gastric material. In cases of cystic fibrosis, the secretion is very viscid and sticks to the glass. In testing for the presence of trypsin, successive dilutions of the fluid are made up to 1:100. Drops of the dilutions are applied to a gelatinous surface and incubated for one hour. If trypsin is present, the treated portion of the gelatine digests leaving a clear spot. A test for trypsin in the stool may be carried out in a similar manner.

X-ray studies of the chest show generalized, obstructive emphysema and patchy areas of atelectasis. With further development of the disease, bronchopneumonia and bronchiectasis can be visualized.

Treatment

The main objectives of treatment are to : maintain good nutrition, control pulmonary infection and prevent abnormal losses of salt. A diet high in calories and protein and low in fat is recommended. Foods should be salted liberally; in hot weather prophylactic therapy with salt tablets may be advisable. It is also important to see that the child receives an adequate fluid intake. Water-miscible vitamins are given in twice the usual amount.

To help compensate for enzyme deficiency, substitution therapy in the form of pancreatic extract is given at each meal. The stool is controlled in bulk and character by the reduction of fat in the diet; pancreatic extract reduces the number of stools, decreases excessive appetite, causes a weight gain and improves the general well-being of the patient.

The control of pulmonary infection is obtained by the use of antibiotics on a long-term basis. Broad spectrum agents such as aureomycin, terramycin, erythromycin and chloromycetin are given orally, either alone or in combination. The usual dose is 30-50 mg. per Kg. per day or higher. Sulfa drugs may be used in mild cases, alone or in addition to the above-mentioned agents.

In more severe cases, when the cough persists and the chest does not clear, inhalation therapy is indicated. The patient breathes a mist of aerosol solution for the purpose of thinning the secretions and carrying the drug directly to the site of infection. The easiest method is the use of a tent during the patient's sleeping hours. It is filled with a mist from a nebulizer, the aerosol solution usually being propylene glycol in distilled water.

Intermittent positive pressure breathing (I.P.P.B.) is relatively new and a very useful method of treatment for those with the greatest pulmonary involvement. It is best used in conjunction with continuous night aerosol but only when pulmonary secretions are in a liquid state. I.P.P.B. must be administered by a physician, as dangerous results may occur.

Postural drainage has considerable value and is best done on arising and after rest periods. For the older child, breathing exercises, taught by a physiotherapist, can also be helpful. Codeine or any cough suppressing medication is contraindicated, as coughing is necessary to remove the secretion. A warm, moist climate is beneficial but is not sufficient without adequate treatment.

More about Betty

The next three months of Betty's life were spent in the children's hospital. Cystic fibrosis was suspected, and the results of the sweat electrolyte test confirmed the diagnosis. Betty was placed in a tent where she received aerosol treatment. She was given tetracycline orally. Organidine helped to keep the mucous secretions in a liquid state. Cotazym, which contains lipase, tryp-

sin, amylase and other pancreatic enzymes, was given daily. Her diet was regulated with a formula of Nutramigen (low in fat) and supplemented with a double dose of Ostoco.

As soon as the baby seemed stronger and began to improve, plans were made for her discharge. Prolonged hospitalization increases the danger of cross-infection and cystic fibrosis patients are sent home as early as possible.

Before she was discharged, the children's hospital requested the public health nurse to visit Betty's mother at home. They wished to learn if she had the requisites for looking after the baby; if adequate care could be expected; if the child could be provided with the expensive medications and humidifying equipment necessary for treatment.

Home for Betty was an upstairs apartment in a noisy downtown area. The entrance was by a dark, closed stairway at the back of the building, but the three, small rooms were bright and Donna always kept things clean and tidy. Fred had just got his job back as taxi driver when he and Donna were married. They set up housekeeping with the help of the Family Service Bureau, which provided them with most of their used household effects.

Donna had had a job folding paper cartons in a box factory. She had hospitalization paid in advance to cover her own hospital account and the baby's. She had been eligible for unemployment insurance but this had run out. She said she kept hoping she might be called back to her old job. If she was working when Betty came home from the hospital, she thought she could get someone to come in and look after her.

When Freddie lost his job he did not seem too upset about his lack of employment. He visited the employment office frequently, but there never seemed to be anything for him. The family was registered with City Welfare which took care of the rent, light and gas, and allowed them $32 in cash every two weeks.

About this time, Fred's mother came to live with them. She lived on a $55 per month disability pension due to a heart condition. She was well known to the local welfare agencies, and her contribution to the family economy was a bag of groceries now and then and occasionally a bit of cash.

Nothing had been added to the original, small supply of baby things, and the bassinet had passed its usefulness. Betty's young mother had looked after her sister's children occasionally which gave her a limited amount of experience in child care. She was anxious to have her baby home and felt confident that she could do all that was necessary. The baby's father expressed the thought that "she'd be all better or they wouldn't let her out" and her grandmother had "raised eight and knew all about babies."

In subsequent visits the public health nurse endeavored to explain the nature of the disease and the immediate care necessary. She tried to make it clear that Betty was an infant with a chronic disease and that there was considerable responsibility in caring for a child with a long-term illness.

The Family Service Bureau was called upon again and provided a crib, mattress and adequate bedding. The Canadian Cystic Fibrosis Foundation, through the children's hospital and family physician, was asked for assistance in providing care for this patient. Its contribution was a humidifier valued at more than $200. It was installed free of charge in the child's home under the personal supervision of the chairman of the Foundation. The mechanism was explained and the care and operation of the tent and nebulizer were taught to the parents. They were assured that help was available at any time if difficulty was encountered in its operation.

The next step was to ensure a continuous supply of drugs. It was hoped that a local service club might become interested in providing money for this project. However, the prospect of an account for drugs and formula amounting to $90-100 monthly, for an indefinite period of time was too overwhelming. Finally, the full responsibility for this expense was accepted by welfare.

When Betty came home she seemed bright and happy but she was extremely small and thin for her age. Her skin appeared dusky and she had very frequent coughing spasms. Her mother was most interested. She made arrangements with the people in the downstairs apartment to keep the formula in their refrigerator, and she borrowed a friend's washing machine to take care of the extra washing. Donna managed the baby well. She gave good care and the child received her medications regularly.

When the baby was taken to the hospital three weeks later for a check-up, she was

re-admitted. She had pneumonia and had lost weight. Her condition deteriorated and it was only a short time before she died. The immediate cause of death was bronchopneumonia and chronic bronchitis resulting from cystic fibrosis.

Prognosis

At present there is no cure for this disease. The best that may be offered these patients is an early diagnosis, with prophylactic administration of antibiotics and dietary therapy before pulmonary involvement becomes severe.

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In Memoriam

The Royal Inland Hospital School of Nursing, Kamloops, B.C. deeply regrets to announce the death of two student nurses, **Lynne Abbey** and **Gayle Midnight**, as the result of a traffic accident on August 8, 1962.

* * *

Evelyn Margarette (Roy) Ambler (Royal Alexandra Hospital, Edmonton '27) died in Keremeos, B.C. on August 13, 1962. Her home was in Vancouver and she had served for several years on the staff of Willow Chest Centre.

* * *

Mrs. Maynard Linden Carter (St. Bartholomew's Hospital, London, Eng.) died in England early this year. Formerly Chief of the Nursing Division of the League of Red Cross Societies, she was particularly interested in the development of public health nursing in Central Europe. Mrs. Carter assisted in the establishment of international nursing courses at Bedford College for Women and the Royal College of Nursing. She suggested the formation of the Old Internationals Association and was first Honorary President of the group. Another of her special interests was the formation of the Florence Nightingale International Foundation.

* * *

Sheila (Poulter) Drake (Grace Hospital, Windsor, Ont. '58) died in an airplane crash on July 23, 1962.

M. B. Lauretta Dumais (St. Vincent de Paul Hospital, Sherbrooke, P.Q., '26) died in Chicoutimi early this year.

* * *

Greta Lillian Emmerson (Saskatoon City Hospital, Sask. '31) died in Bengough, Sask. on July 29, 1962. She was the director of nursing of Bengough Union Hospital at the time of her death.

* * *

Edith Guisan, president of the Swiss Nurses' Association, died earlier this year. In 1958 she was entrusted with the task of reorganizing the structure of the association for the purpose of uniting the nurses of her country and strengthening the Association generally. She lived to see the success of her efforts in this respect.

* * *

Margaret (Albright) Hobden (Hamilton General Hospital, Ont. '16) died in Oshawa, Ont. She had retired from nursing.

* * *

Laura Lafreniere (Holy Family Hospital, Prince Albert, Sask. '34) died in Vancouver on July 25, 1962.

* * *

Mary C. Monro (St. Clair Hospital, Cleveland, Ohio, '14) died in June at Clarkson, Ont. She had retired from nursing.

* * *

Bernadette Ryan, an Ontario nurse, died

(Continued on page 1001)

THE WORLD OF NURSING

PREPARED IN YOUR NATIONAL OFFICE, CANADIAN NURSES' ASSOCIATION,
74 STANLEY AVENUE, OTTAWA

Press coverage of the 1962 Convention

As noted in this column last month, there were a great many events of general interest to the public competing for space in the newspapers of Canada during the week in June when the thirty-first convention of the Canadian Nurses' Association was in session. It was a matter of considerable satisfaction, therefore, to check through the sheaves of newspaper clippings received at National Office and to realize that the people of Canada had had a pretty fair opportunity to read about the activities of the nursing profession. The actual count showed that 210 articles had been carried by 82 different newspapers in 62 centres across the country. The provincial distribution of the 82 newspapers was as follows :

Alberta 5, British Columbia 14, Manitoba 7, New Brunswick 4, Newfoundland 1, Nova Scotia 7, Ontario 34, Prince Edward Island 1, Quebec 4, Saskatchewan 5.

Many newspapers, particularly in British Columbia, gave day-by-day coverage of the principal events. Typical of the attention-getting headlines that appeared is the following sampling :

Nurses' Group Aims to Improve Service — *Vancouver Sun*, June 23.

(Account of an interview with President Helen Carpenter.)

Tomorrow's Nurse Will Require More Education — *Kamloops Sentinel* (B.C.), June 26.

(Commentary on Dr. Hickman's Keynote address.)

CNA Membership Doubled to 63,822 in 10 years — *Ottawa Citizen*, June 26.

(Summary of the Executive Director's report.)

Educational Program Complete in 20 Years — *Calgary Albertan*, June 26.

(Predictions included in Mrs. Hassenplug's address.)

Scholarships for Nurses — *St. Thomas Times-Journal* (Ont.), June 27.

(Announcement regarding the Canadian Nurses' Foundation.)

Humanity Said Chief Nursing Requirement — *Vancouver Sun*, June 27.

(Miss Nussbaum was interviewed by the press prior to giving her address. Here are some of the quotations from her remarks :

"We must always remember that the patient is helping us in our profession as much as we are helping him. He helps us by presenting to us the changes in society and provides us with an awareness of the world around us. He keeps us humane instead of academic."

She said she would rather that nurses had " a feeling of understanding instead of one of compassion for the people they are caring for.")

Stresses Need for More Home-care Programs — *Trail Times* (B.C.), June 29.

(A good summary of the points discussed by the panel of doctors and nurses.)

Nurses Told of Plan to Rescue One Million — *Winnipeg Free Press*, June 30.

(A review of the principal points made by Major General A. E. Wrinch. This material will be included in *The Canadian Nurse* in a special issue on emergency measures organization that will be published in January, 1963.)

Miss ALICE GIRARD and the members of her committee. *L to R:* Miss UDELL, Miss CLAMAGERAN, Miss CHAMBERS, Miss VERBEEK, Miss M. POWELL, Miss CREELMAN; seated, Miss GIRARD and Miss F. POWELL.

ICN Nursing Service Committee

The ICN Nursing Service Committee held a four-day meeting at ICN House in London last August. Presiding was Miss Alice Girard, dean, faculty of nursing, University of Montreal, and a past president of CNA. The Committee was privileged in having at its meeting the president of the International Council of Nurses, Mlle Alice Clamageran and also Miss Lyle Creelman, chief, nursing section, World Health Organization.

Major topics discussed were :

Staffing of nursing services;

The nurse's responsibility in connection with the design and planning of new units;

Nursing legislation and legal aspects of nursing;

Auxiliary personnel.

It was decided to translate a document, prepared by the committee in 1961, into Spanish and French. Outlining basic principles for initiating legislation and for the content of nursing laws, it was felt that this material would be valuable to national nurses' associations and others facing problems of nursing legislation.

Hospital Planning Declared Outdated

"The average hospital in Canada and the United States is 20 years out of date the day it opens," Canadian-born Gordon A. Friesen, head of a Washington firm of hospital consultants, told a luncheon meeting at the Canadian Nurses' Association convention :

"We in the hospital field are traditionally inclined to constantly perpetuate what has been done in the past. It is high time we took stock and stopped being content merely to perpetuate.

"It is tragic to see some of the things that are being done in the hospital field to-day. Far more care is needed in design and forward planning if a hospital's operation is to be anything like efficient.

"If an industrial organization oper-

ated in the same way as the average hospital it would go bankrupt overnight. The cost of operating a hospital for one year is equivalent to 40 per cent of its capital cost. Seventy cents of every operating dollar is spent on payroll. If hospital building continues at its present rate payroll costs will absorb 80 cents of every dollar spent."

Emphasis on Health Shifts

"Canadians are becoming more health conscious than ever," says a University of B.C. medical educator. Dr. Donald H. Williams, head of the Department of Continuing Medical Education, spoke to delegates at the final session of the convention. He said public interest in health matters is shown by the growth of voluntary health organizations. Management and employee groups are also showing a growing awareness of health problems. There has been an important change of emphasis in medicine during the past 30 years. Previously diagnosis and treatment were the primary concern. Today, preventive medicine and public health have assumed great importance.

Nightingale School Graduation

Modelled on the pattern of the independent school of nursing demonstrated by the Canadian Nurses' Association at Windsor, Ontario, the first 23 graduates of the two-year program at Nightingale School, Toronto, have received their diplomas. Owned by the Province of Ontario and sponsored by the Ontario Hospital Services Commission, a fine new building houses the School this autumn. Fifty-five students are now in their second year and 60 first-year students were admitted in September. Mrs. Blanche Duncanson, director of the Nightingale School, is now the president of the Registered Nurses' Association of Ontario.

In Memory — November 11th

As our thoughts return to war years
And our memories shine so clear;
We can almost feel the presence
Of those we all held dear.

They gave their lives for others
Without ever counting cost;
And the greatness of the deeds they did
We must never count as lost.

The fear and pain they suffered
We understand and know,
And by our grateful memories
Our appreciation show.

They lie in graves, some far away
In strange and foreign lands.
Their peace — we know was so deserved.
Our peace — They're in God's Hands.

DOROTHY M. DENT

(Continued from page 998)

in Renfrew, Ont. in June.

* * *

Agnes Slattery, an Ontario nurse, died in London, Ont. earlier this year.

Violet (Foreman) Stewart (Hamilton General Hospital, Ont. '18) died recently.

* * *

Margaret Annie (Sinclair) Westbury (Yorkton General Hospital, Sask., '30) died in July in Tisdale, Sask. She was a head nurse on the staff of St. Therese Hospital, Tisdale, at the time of her death.

* * *

Alexandria Wiwicharuk (Yorkton Union Hospital, Sask. '61) died in Saskatoon early this year. She was on the general staff of Saskatoon City Hospital at the time of her death.

In the period since January 1958, when the European Economic Community came formally into being, spectacular progress has been achieved. With an undoubted spur from initial tariff changes and other measures of economic cooperation, industrial production in the Community has continued to advance at a rate of over eight per cent per year.

—*Monthly Review*, The Bank of Nova Scotia, Sept.-Oct., 1961.

ANEMIAS IN PEDIATRICS

ROBERT GOURDEAU, M.D., F.R.C.P. (C)

A brief review of the common causes of anemia, possible preventive measures and some forms of treatment.

Anemia is a reduction below normal of the number of circulating red blood cells, of the quantity of hemoglobin or of the volume of packed red blood cells (hematocrit) per 100 ml. of blood. The determination of the latter three values is most important because what really counts for the patient is the available quantity of oxygen carried to the tissues by the hemoglobin of the red blood cells.

The clearest and most simple classification of anemias is the following :

Hemorrhage
(a) acute blood loss
(b) chronic blood loss
Increased destruction
(a) intracorpuscular
1. congenital spherocytosis
2. hereditary elliptocytosis
3. congenital non spherocytic hemolytic
4. thalassemia
5. hemoglobinopathies

(b) extracorpuscular
1. acute hemolytic, e.g. erythroblastosis
2. hemolysis from infections, drugs or physical agents
3. associated with collagen diseases e.g. lupus, rheumatoid arthritis.

Failure of production
(a) lack of necessary materials for erythropoiesis
iron deficiency
protein deficiency
intrinsic factor deficiency
(b) replacement of marrow by abnormal cells e.g. leukemias, lymphosarcomas, other malignancies

If the cells are small and contain little hemoglobin the anemia is termed microcytic and hypochromic.

If the cells are large and well filled with hemoglobin, the anemia is macrocytic.

If the cells are of normal size and color it is called a normochromic normocytic anemia.

If the anemia is progressive, there will be few symptoms except pallor and fatigue. If it is acute, as in severe blood loss or acute destruction (hemolysis), the symptoms will be more striking, such as pallor, hypotension, shock, etc. In the case of rapid destruction the body will have to deal with products of degradation, like iron pigment, bilirubin pigments, and this, if severe, might lead to hemosiderosis (iron storage in tissues) or to hemolytic jaundice.

The age of the child is of great help in arriving at a proper diagnosis in pediatric hematology. In the newborn infant we see anemias from :

1. Hemolytic disease of the newborn, also commonly called erythroblastosis fetalis (ABO or RH)

2. Hemorrhage

- outside
- placental
  - — cesarean section
  - — placenta previa
  - — in the mother
  - — in a twin
- cord
- internal
  - Volvulus
  - Hemorrhagic disease of the newborn

In the infant three months to two years of age, we see mostly the following:

1. Anemia of the premature at 2-3 months of age
2. anemia of the full term at 3-4 months of age
3. iron deficiency anemia between 8 months and 30 months of age.

The first two are called physiological anemias, meaning that infants of that age reach the lowest level of hemoglobin without pathological cause. In this condition no treatment is necessary. It is self-corrective as soon as the bone marrow becomes more active.

The third one, iron deficiency, is a very important problem in pediatrics and worthy of some discussion because 50 per cent of all cases of anemias from birth to sixteen years of age are due to iron deficiency. Of these, 50 per cent are seen between six months and two years. It is a condition still too prevalent because it is easily preventable and its incidence has changed very little in the last 20 years. It is not fatal but carries with it the danger of complicating infections.

This type of anemia supervenes when the iron stores in the body cannot meet the demands made upon them for synthesis of hemoglobin, myoglobin, iron-containing enzymes, and for excretion, whether physiologic or due to chronic blood loss.

The explanation of the frequency of iron deficiency anemia is the exaggerated demand made on the system by the tremendously rapid growth during the first year from an average of seven pounds to twenty-three pounds. During this short time the infant doubles his hemoglobin mass and triples his blood volume. This is even more marked in the premature.

The iron is stored mostly in the liver in very small quantities. If the mother was anemic or the baby premature, or if there has been bleeding, the iron reserve would be extremely small. The procedure of waiting for pulsations to cease before tying the umbilical cord adds about 30 to 40 mgm. of iron to the baby's store.

Diet is important, as is vitamin C. A quart of milk contains 1.5 mgm. of iron and the daily need is 5 mgm. It is important, therefore, that solid foods be added at not later than two months of age to prevent the onset of iron deficiency. Vitamin C enhances the absorption of iron from the intestinal mucosa and should be available at all ages. In many situations, extra iron must be supplied. There are many good commercial preparations of iron available.

Only very rarely can other conditions simulate iron deficiency anemia. There may be confusion in thalassemia, certain congenital hemoglobinopathies, lead poisoning, pyridoxine deficiencies, pulmonary hemosiderosis, malabsorption syndromes and hookworm infestation.

Prevention consists in an adequate iron intake during pregnancy and supplemental iron to prematures, twins, babies who have had blood loss or who were born of anemic mothers. Treatment is provided by correction of the diet. Blood transfusions are rarely necessary. Medicinal iron is given orally or, in selected cases, intramuscularly. The use of preparations containing B12, copper, cobalt, liver extract is not recommended. Response to treatment is shown by an increase in the reticulocytes on blood smear and a steady rise in hemoglobin level.

Another large group that may be seen at all ages comprises anemias due to prolonged infections. It is a mild type (8-10 gm. Hgb. per 100 cc. of blood) due to failure of the hemoglobinization of the red blood cells during an infectious process thus creating a deficit. The treatment of this type is simply to treat the infection which is the cause.

Any severe anemia in a child aged

two to sixteen years is a serious problem that should be thoroughly investigated. Assuming that there has been no acute or chronic blood loss, one has to look for the following causes in order of frequency :

Acute leukemias
Acute hemolytic anemias
Congenital spherocytosis
Severe renal disease
Congenitally abnormal hemoglobin
Lymphosarcoma or other malignancies
Aplastic anemias

Of all these, leukemia is the most frequent and also one of the most tragic and dreaded. It accounts for about 50 per cent of all types of malignancies diagnosed in pediatrics. This fatal disease is a great mimic and can simulate purpura, rheumatic fever, rheumatoid arthritis, osteomyelitis, etc. Often a bone marrow study is needed to make the diagnosis. Up to the present time, we can offer only a prolongation of the patient's life for 12-15 months using, by way of treatment, blood transfusions, steroids, 6-mercaptopurine, methotrexate and a few more recent cytotoxic drugs.

Any child with severe anemia who does not have iron deficiency or chronic blood loss should be referred to a hematologist who has the facilities to perform bone marrow aspirations and biopsies, red blood cell fragility tests, antibodies search, detection of abnormal hemoglobins and who can, with that specialized help, arrive at an accurate diagnosis, which is essential for etiologic treatment.

It would be extremely rare to have to resort to anything else but medicinal iron, transfusions for replacement of blood loss, and treatment of infections to deal sanely and logically with most types of the anemias seen in the pediatric age group.

Stings from bees or wasps can be fatal. Most of such deaths are due to anaphylactic shock. In a few cases death is from local reactions, glottal edema with suffocation, from stings in the throat.

Local treatment — Bees leave their sting in the skin of the victim. Removal demands great care and should be performed by scraping away with a knife or finger nail. If grasped by fingers or forceps more venom may be injected as the poison sac usually is still attached. Antihistamine ointment usually affords immediate relief from pain, and further swelling is rare. The popular faith in ammonia water and other basic substances is based on the erroneous belief that the toxic substance is formic acid.

Systemic treatment — Anaphylaxis may be treated with adrenalin, well diluted with saline, and administered very slowly by the intravenous route. Adrenalin may cause ventricular fibrillation, but intravenous antihistamine preparations are free of this risk.

Medical Digest, Vol. 7, No. 7

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It is not that you do wrong by design, but that you should never do right by mistake.

JUNIUS

Handicapped persons who find it difficult or impossible to dial a telephone may be able to obtain assistance from Bell Telephone. A multiple sclerosis patient, whose only contacts with friends were by phone, finally had to forego this pleasure because of inability to operate the dial. Consultations with Bell Telephone experts soon provided a solution to the problem.

—Multiple Sclerosis Society of Canada.

* * *

Canada added about 350,000 inhabitants during 1961, raising its population to 18,390,000. This increase of 1.9 per cent, however, was considerably below the Canadian annual average of 2.7 per cent in the preceding decade.

The growth during 1961 was due almost entirely to an excess of births over deaths. There were about 478,000 births, a rate of 26.3 per 1,000 population, compared with 139,000 recorded deaths.

— Metropolitan Life Insurance Company

* * *

The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man.

—G. B. SHAW

Swallowed Blood Syndrome

UMBERTO CALLEGARINI, M.D.

The Apt Test is a simple way to determine whether the blood is fetal or adult.

It is quite alarming to see a newborn baby vomiting bright red blood or passing it through the stools. Quite naturally, the nursery is filled with restlessness and a puzzled concern arises on the part of both nurses and doctors.

The most varied, frightening diagnoses are suspected in the differential list and prognosis may be considered poor. Treatments ranging from transfusion to surgery are naturally predicted upon examination of an apparently pale baby under an artificial light. Of course, differential diagnoses including gastro-intestinal bleeding, hemorrhagic disease of the newborn, perforated duodenal ulcer, purpura, etc., must be ruled out by an accurate laboratory investigation. It must be remembered that this bright blood does not necessarily originate within the infant.

The newborn can pass bright blood from the mouth or rectum on the first or second, and at times, even on the third day after birth. This bright blood, in most instances, is found to originate from the mother. It has been swallowed by the infant during birth or sucked from an excoriated nipple. This is the so-called Swallowed Blood Syndrome. This syndrome has priority in the immediate investigation. Once it has been ruled out, the investigation of other causes of hemorrhage must be continued.

There is a test that can be performed in any nursery by members of the staff that can accurately denote the presence of swallowed blood. This test is known widely as the Apt test. In order to understand the test fully, one must first be aware of certain characteristics of fetal blood.

During gestation, the fetus receives into its circulation only partially oxygenated blood. Mother Nature, in order to compensate for this deficiency of oxygen has provided the fetus with blood that contains a special type of hemoglobin, called hemoglobin "F" (Fetal). Hemoglobin "F" differs from hemoglobin "A" (Adult) in two basic ways. First, Hgb. F becomes fully saturated at an oxygen concentration of less than 50% of the concentration required by Hgb. A. Second, a fact which is the basis of the Apt test, Hgb. F is resistant to alkali denaturation while Hgb. A is not. Dr. Apt has devised the following test for this differentiation.

Equipment: 1. Sodium Hydroxide 1%.
2. Test Tubes.

Method: 1. Rinse blood-stained diaper, or some grossly bloody stools, or emesis, with a suitable amount of water to obtain a distinctly pink hemoglobin solution.

2. Centrifuge the mixture and decant the supernatant solution.

3. To five parts of this supernatant solution add one part of 1% Sodium Hydroxide.

4. Within one to two minutes a color reaction takes place.

A yellow-brown color indicates that the blood is maternal in origin; a persistence of the pink color, that it is from the infant. A control test with known adult or fetal blood, or both, is advisable.

CHILDHOOD NEPHROSIS

P. W. JUNGER, B.A., M.D., F.A.A.P.

Nephrosis is a long-drawn-out disease that demands and deserves the maximum amount of teamwork to help the child and his parents through the exhausting physical, emotional and financial strain.

The so-called nephrotic syndrome is a disease of the kidneys that is characterized by the following features :

edema

proteinuria

reduction of serum proteins (hypoproteinemia and hypoalbuminemia)

elevation of fat substances in serum (hyperlipemia)

This complex of symptoms is known to occur in association with certain recognized systemic diseases, such as amyloidosis, diabetes mellitus, lupus erythematosus, syphilis and malaria. The syndrome may also develop as a consequence of renal vein thrombosis, drug toxicity (tridione, gold and mercurial salts), and after bee stings or poison oak dermatitis. The causes listed above account for the majority of cases in adults and adolescents. Practically all cases of the nephrotic syndrome in childhood, however, develop in the absence of any known toxic agents and are unrelated to underlying systemic diseases. In other words, no cause for the disease is known and for that reason we refer to this condition as the "idiopathic childhood nephrosis." The following discussion is limited to this latter condition.

Incidence

Nephrosis is commonest between the ages of one and four years and occurs with a frequency of about 3 per 100,000 in the population at large or 25 per 100,000 population under five years of age. Average age of onset is 2½ years. It can occur under one year of age and even during the newborn period. It is more common in boys than in girls.

Etiology

No cause is known except for the rare instance where toxic reactions to certain drugs, bee stings or poison oak dermatitis are involved. In most instances, it is not possible to relate the onset of the disease to any other clinical disturbance, infectious or non-infectious, as distinct from acute glomerulonephritis which follows a preceding streptococcal infection.

Pathology

The kidneys are enlarged and yellowish. The glomeruli always show a thickening of the basement membrane, the earliest and most consistent finding. As the disease progresses the changes become more marked and take on the characteristics of subacute and chronic glomerulonephritis with cellular infiltration, hyalinization and even fibrosis of glomeruli. The tubules are always dilated, show signs of degeneration and contain fat droplets. Since the introduction of needle-biopsy of the kidneys, it has been shown that the histological picture correlates well with the clinical picture in as far as the mild changes are reversible. These patients can go on to cure, whereas the severe progressive changes are not

reversible and these patients die.

Clinical Picture

The onset is usually insidious in a previously healthy child. The parents first notice puffiness of the eyes and later swelling of the ankles, legs and abdomen. The edema may progress and involve the whole body, with edema-fluid accumulating in the abdomen (ascites) and the chest (pleural-effusion). In this state, digestion and respiration are often impaired by fluid pressure. The edema of penis and scrotum is often very marked and worries parents a great deal, yet urination is almost never compromised. The anasarca may progress, may reach a static state or may regress spontaneously. Reaccumulation of edema often occurs after intercurrent infections. As these patients already have a much reduced resistance, infection is the most common complication. They are especially prone to skin infections (erysipelas), peritonitis and pneumonia. In the days before antibiotics were available infection was the most common cause of death. Today, infection is usually readily controlled with proper treatment. This fact alone accounts to a large extent for the reduced mortality rate. However, the present mortality rate is still around 50 per cent. The others get well after a variable duration of the disease — usually two-three years, sometimes longer.

Laboratory Findings

Early in the course of nephrosis there are three characteristic laboratory findings :

1. *Massive proteinuria :* usually several grams of protein are excreted daily. This can reach proportions of 10-15 grams per day.

2. *Hypoproteinemia :* depletion of serum proteins caused by the loss of proteins in the urine. As the serum proteins usually bind water in the vascular system on account of their osmotic pressure, water leaves the blood and enters the body tissues and cavities producing edema and ascites or hydrothorax.

3. *Hyperlipemia* or accumulation of fat substances in the blood. The blood cholesterol may be elevated to as much as 1400 mg. per cent as compared to the normal of 200 mg. per cent. The reasons for this are not clear.

Besides these typical findings there are several others : elevated sedimentation rate, often NPN retention and impairment of renal clearance studies. NPN retention can be an ominous sign, but sometimes is seen transiently in patients who eventually recover. In cases in which irreversible renal impairment has become established electrolyte disturbances may occur leading to hypocalcemic tetany or potassium intoxication.

Treatment

Good supportive treatment is of paramount importance and includes prevention of infection, vigorous treatment of any infection, and adequate calories. The low sodium diet, so effective in other edematous states, has been shown to be ineffective. To tempt the appetite, favorite foods, especially proteins, are included in a well balanced, vitamin-rich diet, avoiding only excessively salty foods. Fluid intake is not restricted. The skin, overdistended by edema, requires a great deal of care.

The most important part of the therapy lies in the administration of steroid hormones which usually produce diuresis, loss of edema, and normalization of laboratory findings. Steroids are usually given by mouth in the form of cortisone or one of its derivatives for a period of two to four weeks and intermittently thereafter, depending on the course of the disease. When no response or an inadequate one results from the steroids, the I.V. administration of concentrated albumin or plasma expanders (e.g. Dextran) and possibly nitrogen mustard may be indicated. Mechanical relief of tension, by abdominal paracentesis or thoracentesis, may at times be necessary.

Almost as important as the treatment of the child is the management of the parents. In a disease of such long duration, with the outcome so uncertain, the parents need a great deal of explanation, careful guidance, and understanding.

The love you liberate is the only love you keep.

URINARY CALCULI

T. N. NEARING, M.D., C.M.

The commonest causes of urinary calculi in children are obstruction, stasis and infection.

Urologists treat many diseases of the urinary tract. One of the commonest concerns stones or calculi. This is referred to as urinary lithiasis. This condition occurs four times as often in males as in females, is commonest between the ages of 20 and 60 and is extremely rare in children.

There are numerous causes for stones in the urinary tract. The definite causes are :

Poor drainage and infection; disturbances in diet and vitamin consumption; metabolic disturbances, e.g. familial cystinuria, uric acid, oxaluria, xanthinuria, gout and hyperparathyroidism; recumbency.

In children all of these causes must be considered but the most important factors are urinary tract obstruction and infection.

Obstruction acts by causing slowing of the urinary drainage which allows re-absorption of some of the water content of the urine with resultant increased concentration of the crystalloids and precipitation into crystals or calculi.

Infection acts by :

1. Producing a foreign substance or nidus, clumps of bacteria or blood clots, around which crystallization takes place;
2. by altering the acidity of the urine some urinary salts are precipitated out. The common urinary infecting organisms are E. Coli, proteus, Streptococcus fecalis and staphylococcus. Some of these infections cause a change in the acidity of the urine which leads to precipitation of the salts and stone formation.

The common obstructing lesions of the urinary tract in children which predispose to stasis, infection and calculi are :

1. Uretero-pelvic obstruction:
   intrinsic — stricture
   valves
   mucosal folds
   hypertrophy of the ring muscle
   extrinsic — aberrant vessels
   ptosis
   adhesions
2. Ureteral strictures
3. Ureteroceles
4. Contracted vesical neck
5. Posterior urethral valves
6. Neurogenic dysfunction of the bladder.

Hyperparathyroid and Vitamin D excess act by raising the serum calcium level and urinary calcium content. The serum calcium level is also raised in recumbency, high calcium intake, certain infections, acidosis, Cushing syndrome. Vitamin A deficiency acts by causing changes in the epithelium of the renal pelvis, ureter and bladder, thus producing a site for the crystallization of the salts to take place. Cystinuria and gout result from inborn error in metabolism. Stones are more common in a hot dry climate. This is most likely directly related to urine concentration and super-saturation.

Signs and Symptoms

Children show the same symptoms as adults. Signs depend on the size, number and location of the calculi. Renal calculi are often associated with constant dull back pain and infection. A calculus in the ureter which is mov-

ing or obstructing the kidney will give severe colic-like pain that will radiate to the testicle in the male and the labia in the female. Bladder calculi give rise to symptoms of frequency of urination, burning, feeling of incomplete emptying and occasionally urinary retention. The urine can be free of sediments but usually shows traces of albumin, R.B.C. and W.B.C.

Diagnosis is made by history, physical examination, x-ray of the abdomen, intravenous pyelogram and cystoscopic examination. Uric acid and cystine stones do not show up on x-ray but can be diagnosed by intravenous pyelogram.

Treatment

A. *Prevention of calculus formation*

It is here that nursing care is extremely important. In patients with severe trauma or polio, where one can anticipate prolonged bed care the following can be done to prevent calculus formation :

1. Forced fluids;
2. balanced vitamin acid ash diet;
3. give acidifying agents by mouth — ascorbic acid or mandelamine;
4. turn patients frequently. This will cut down on the osteoporosis and calcium excretion as well as help drain dependent calyces thus preventing stasis;
5. At times it is wise to cut down on calcium intake;
6. If patient has an indwelling catheter, urinary tract antiseptics may be ordered orally, e.g. sulfa drugs and local installations of acidifying solutions such as, acetic acid or Renacidin which will prevent bladder calculi from developing.

B. *Treatment of established stones*

Non-operative therapy is instituted if :

1. Patient's pain can be controlled;
2. no danger exists of damage to kidney tissue by obstruction or infection;
3. stone is small enough to pass spontaneously.

This type of therapy consists of : Sedatives; antispasmodics to relax the ureter; forced fluids; urinary antiseptics to prevent infection.

Operative therapy is determined by the size and site of the stone :

Stones in the kidney itself which are too large to pass must be treated by surgical operation — pyelolithotomy, nephrolithotomy, and sometimes partial nephrectomy. If at the time of operation a condition is found that predisposes to stone formation, this condition is corrected.

Stones in the upper two-thirds of the ureter which will not pass spontaneously or that, though small, are causing obstruction, infection or intractable pain must be treated by open operation — ureterolithotomy.

Stones in the lower third of the ureter are treated by : Ureteral dilatation; extraction by an instrument; cutting the ureteral orifice (meatotomy); if all these fail a ureterolithotomy is done.

Follow-up therapy consists of diet regulation, large fluid intake and periodic x-ray studies.

CONVULSIONS and EPILEPSY in Childhood

GLORIA JELIU, M.D., F.R.C.P. (C)

Convulsion in childhood may be a comparatively benign condition or may signify underlying acute pathology.

Definition and Description

A convulsion is a clinical syndrome caused by a sudden, paroxysmal, transitory discharge within the brain. Normally, there is a state of cerebral equilibrium in relation to inhibitory and excitatory impulses. Disruption of this state through a variety of causes will produce the end result of convulsion.

Typically, a convulsive attack is characterized by loss of consciousness; abnormal, involuntary movements, principally rhythmic muscular jerking either generalized or restricted to certain muscle groups. These muscular contractions are described as clonic movements. They may be accompanied by urinary and fecal incontinency, particularly in epileptic attacks.

The clonic stage may last for a few minutes only or persist for much longer periods of time, even hours. Ordinarily it is followed by a period of drowsiness or relatively deep coma. During the clonic phase the patient exhibits respiratory difficulty of variable intensity caused by excessive salivation. The swallowing reflex disappears; cessation of respiration occurs and produces fairly marked cyanosis.

Causes

Convulsions are seen quite frequently in early youth. About four per cent of children admitted to hospital are there due to convulsive attacks. Broadly speaking about 90 per cent of convulsions make their first appearance in childhood. Specific causes are varied and difficult to classify. One can, however, make one major distinction by setting epileptic disorders apart as a separate group.

Not all convulsions in children are indicative of epilepsy and, vice versa, epilepsy is not always characterized by a convulsive attack.

1. *Non-epileptic convulsion*

The syndrome is initiated through a pathological condition affecting cerebral function. Generally speaking, these attacks are easily controlled and frequently respond to specific treatment.

Febrile convulsion can be included in this category. It is the most common type seen in infants and children. It occurs as the result of a rapid rise in temperature following a relatively innocuous infection such as a cold or inflammation of an ear. The attack is brief — a few minutes to a quarter of an hour — and subsides rapidly when the fever is reduced by customary means (aspirin, alcohol sponging, etc.). Febrile convulsion is a benign condition and the child outgrows it.

2. *Epilepsy*

This is the name reserved for the disorder of the central nervous system that is characterized by recurrence of convulsive or other symptoms. Epilepsy may arise from organic lesions in the brain produced by trauma at birth or later in life, by tumors, or by irregularities in the cell structure of the brain that are as yet not fully understood. The condition is manifested in a variety of ways:

a. *Grand mal seizure:* Generalized convulsion, clonic movements, loss of consciousness. Varies as to intensity.

b. *Petit mal seizure:* Brief change in or loss of consciousness (the child may suddenly stop what he is doing and remain immobile for a very short period); minor movements such as blinking of the eyelids or jerking the head.

c. Localized convulsive attacks accompanied by changes in psychic behavior.

The area of the brain affected will determine the symptoms manifested.

The diagnosis of epilepsy is confirmed by characteristic changes in the electroencephalogram tracing. In the presence of a brain lesion, the electrical waves are abnormal.

The future for patients with epilepsy varies. Frequently, anticonvulsive treatment produces excellent control and thus assures the child of a practically normal life and, in particular, regular school attendance. Epilepsy is not necessarily accompanied by mental retardation. The epileptic child, in spite of his convulsive episodes, must continue to attend school so that he may be as well-prepared as possible to take his place as a member of society.

Treatment

The care of the patient in convulsion includes several very important measures:

1. Since respiratory difficulty commonly accompanies an attack, the child should be postured to promote drainage of mucous secretion from the mouth. Suction should be used if possible.

2. To prevent tongue biting, something should be placed between the teeth. A gauze-covered tongue depressor or, in the home, a rolled handkerchief is very satisfactory.

3. Use of restraint during the convulsion is useless. Simply prevent injury to the patient throughout the episode.

4. A convulsion is always potentially serious, either in itself or as a forerunner of underlying acute disease of the central nervous system.

Any convulsion constitutes an emergency and calls for a visit to a doctor or hospitalization. The emergency treatment suggested could be given by non-medical personnel but a convulsive attack also requires administration of an appropriate dose of an anticonvulsant preparation, either intramuscularly or intravenously.

In summary, convulsive attack in the infant or child is a serious syndrome requiring immediate medical attention and eventual hospitalization, with EEG and other examinations to permit diagnosis and establishment of appropriate and efficient treatment.

In a matter of hours, jets whisk passengers from sea-level living to Mexico City vacations and an altitude of 7,340 feet or to La Paz, Bolivia (altitude 13,300 feet).

If you are accustomed to sea-level living, a fast transition to the oxygen poor "thin air" at higher elevations can cause "high altitude sickness." Among its symptoms are drowsiness; headache; blueness of the nails, lips, nose or ears; a feeling of warmth and flushing of the face; troubled sleep; loss of appetite; dizziness.

Some precautions to help minimize high altitude distress include:

Before your trip get a good night's rest and avoid alcoholic beverages and smoking.

About an hour before departure a good breakfast may be eaten but no food should be taken during the rest of the trip.

Physical activity should be reduced during the trip.

After arrival in the high-altitude area, bed rest and light nourishment are advisable.

During the first 24 hours, take it easy.

There are no hard and fast rules to determine who will suffer at high altitudes. Individuals vary greatly in this respect. Some may be symptom-free at 15,000 feet while others are acutely and miserably ill at much lower altitudes. Moreover, there are no tests to tell beforehand who will suffer and who will not. If the traveler finds himself uncomfortably vulnerable at high altitudes, he should seek medical help.

The American Heart, Vol. XII, No. 2

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Each year an estimated $300,000,000 is spent in the United States on popular "headache remedies".

—*Public Health Service Publication No. 905.*

* * *

Almost all our misfortunes in life come from the wrong notions we have about the things that happen to us. To know men thoroughly, to judge events sanely is, therefore, a great step towards happiness.

STENDHAL

CEREBRAL PALSY

ALBERT ROYER, M.D., F.R.C.P. (C)

The term cerebral palsy is of comparatively recent origin. It refers to all types of paralysis stemming from a brain lesion arising either prenatally, at birth, postnatally or at any other subsequent period of life.

The causes of brain damage are numerous. They may be classified according to the time of life at which they appear. Prior to birth, abnormal cerebral development is a factor, as are various hereditary conditions. Little's disease, cerebral spastic paralysis in infants, is an example of the former. Fortunately such lesions are relatively rare.

The causes of brain damage during the perinatal period are much more significant. They account for more than three-quarters of the total number of cases. Although direct cerebral trauma is believed to be a frequent cause, in actual fact cerebral anoxia far surpasses it. Too prolonged use of anesthesia and insufficient oxygenation during delivery is a frequent cause of anoxia. To this can be added cord strangulation, placental detachment, severe placental hemorrhage, asphyxia from amniotic fluid and so forth. Direct trauma takes effect principally through cerebral or subaural hemorrhage, extensive compression sometimes tearing of the membranous covering. A certain number of cases result from brain stem lesions incurred at the time of a difficult breech delivery or as a result of hyperbilirubinemia in fetal erythroblastosis where treatment has been delayed or not given at all.

Postnatal causes include trauma : infections such as encephalitis, meningitis; vascular accidents such as cerebral hemorrhage, ruptured aneurysms etc. A small percentage of cerebral palsy cases are secondary to tumors and the condition may even be the first symptom of the growth. In other instances, cerebral palsy may follow surgical treatment of a brain tumor. Anoxia also is an important factor. It may be brought about as the result of carbon monoxide poisoning, near drowning, partial strangulation, cardiac arrest, etc.

The type of paralysis is determined by the location of the lesion. Thus, lesions of the pyramidal system, ganglia and cerebellum will produce, respectively, spasticity, athetosis and ataxia. Depending on the extent and degree of the lesion, the patient may develop monoplegia (paralysis of a single area), diplegia (paralysis of like parts on either side of the body) or quadriplegia (paralysis of all four extremities). In certain instances only one group of muscles is affected; more rarely, only one or two muscles will show impairment in function.

The majority of cases show additional complications such as epilepsy, about 35 per cent; speech difficulties or aphasia 65-70 per cent; visual disturbances, 30 per cent; hearing defects, especially in cases of hyperbilirubinemia, 15 per cent.

The most serious complication is mental retardation. It occurs frequently but, fortunately, varies as to degree. Some individuals are only slightly retarded, others show more serious results. Generally speaking, approximately one third of cerebral palsy victims will have normal intelligence (I. Q. 90+) and seven per cent of this

number will have above average intelligence (I. Q. 110+). Another third will be educable (I. Q. 60-89) and the last third is made up of those capable of some training (I. Q. 30-50) and those for whom placement in an institution is the only solution.

There is no definite relationship between the degree of physical disability and mental incapacity. A child may show severe physical defect and exhibit only very slight or no mental effects. In contrast one may see a child who is almost unscathed physically but suffers serious mental disability. As a rule, the athetoid patients suffer less mental damage while the spastic individual frequently displays severe retardation.

Although cerebral palsy may appear at any age, prenatal and birth injuries are of great significance due to their frequency and the bearing that such a disability has on the child's eventual development. Symptomatology varies according to the type of paralysis; however certain symptoms are common to all. Most patients have a history of respiratory difficulty at birth with some degree of cyanosis. Feeding problems appear, being related to a poor sucking reflex, difficulty in swallowing or simple inertia that makes feeding almost impossible.

After several weeks or months, these difficulties tend to improve or disappear completely. The majority of affected children are quiet — too quiet — to the point that parents say they never hear the baby throughout the day. He does not move; he is uninterested in persons or objects. During this stage the child is usually atonic or hypotonic.

When the baby is four to six months old, the parents notice that he is not as well developed as he should be. He gains weight less quickly than normal. It is at this point that the signs of athetosis or spasticity become evident. Strabismus and excessive salivation tend to appear now. If the child does not receive treatment, his clinical symptoms become more marked and various physical defects will appear. The latter add to the problem generally and have an adverse effect on rehabilitation.

The incidence of cerebral palsy (1:1000 population) has made this condition a major social, economic and human problem. It has resulted in the formation of various organizations devoted to the welfare of these patients. The Cerebral Palsy Association of Quebec was founded by parents of afflicted children. It has been responsible for the organization of C. P. clinics in the Montreal Children's Hospital and Ste. Justine's Hospital for children, Montreal. The organization and work of these centres is based on the premise that cerebral palsy patients need the services of a variety of medical and paramedical disciplines in order to receive effective treatment. It is accepted that the condition usually has other organic problems associated with it.

Basic clinic personnel should include a pediatrician, orthopedist, neurologist, physiotherapist, occupational therapist, speech therapist, a social worker and a specially prepared educator. In addition, the services of a psychologist, a specialist in hearing, an ophthalmologist and an orthodontist should be available.

Cerebral palsy can, and should, be treated. The over-all planning should include rehabilitation as a person, as a member of a family and as a member of community to the extent that individual capacities permit. Those who have retained normal intelligence can achieve the objective of total rehabilitation. To do so, however, the child requires complete evaluation and this calls for the services of a team of experts.

Treatment must include as one of its aims the correction of physical defects as well as those of an emotional and intellectual nature. This is necessary in order to achieve the greatest possible degree of improvement and fit the child to take his rightful place in society. The most complete investigation and the best of hospital care in themselves are not enough. The parents must be brought into the picture. They must understand their child's problem and the plan of treatment proposed for him. There must be assurance of their cooperation in carrying out at home the treatments begun in hospital. They must appreciate the need to avoid overprotection

of the child and the value of constant stimulation and urging towards independence and self-reliance. Only in this way will the child learn.

Prolonged institutional care, either in hospital or in special school, has not been established as a completely satisfactory form of treatment. Following discharge the children tend to regress markedly, sometimes to the point of losing all benefits acquired. The handicapped child must take his place within the family and later the community. He should develop within this milieu. Hospitalization should be resorted to only for therapeutic purposes. Eventually clinic personnel should act principally in an advisory capacity to the parents upon whom must rest much of the responsibility.

The American Heart Association has recently published the final report of a seven-year pilot project in vocational counselling of young people with heart disease or a history of rheumatic fever. The study grew out of recognition that such young people often choose unsuitable occupations. If their health deteriorates later in life, they may be faced with unemployment or the need to change occupations at a time when retraining may produce great hardship.

The study sought to determine how vocational counseling could be applied as "preventive medicine," to establish the optimum age for counseling and special techniques required, and to appraise the adequacy of community resources in meeting the problem.

It became plain during the study that heart disease and rheumatic fever impose interruptions in the usual flow of childhood experiences, seriously interfering with school progress and personality development. Children in these medical categories therefore need more help than normal children in adjusting to school requirements, including remedial work in many cases, as well as in vocational guidance and seeking jobs.

The study also found that heart-handicapped children are not being reached in large numbers by existing vocational counseling facilities, and that in many instances counseling is not started early enough. When they do get into the job market, these young people are sometimes excluded by training centres and employers from occupations which they might enter without harm to themselves or others.

Copies of the report are available from the American Heart Association, 44 East 23rd Street, New York 10, for $1.50 (soft-cover) and $3 (hard-cover).

The International Labor Conference adopted a Convention concerning equality of treatment of nationals and non-nationals in social security. A member country which has ratified the Convention shall grant within its territory to the nationals of any other member which also has ratified it, equality of treatment with its own nationals under its social security legislation.

Equality of treatment is to apply to both coverage and the right to benefits, in respect of every branch of social security for which the country concerned has accepted the obligations of the Convention. These may be in respect to any one or more of the following benefits: medical care; sickness; maternity; invalidity; old age; survivors; employment injury; unemployment, and family.

Equality of treatment as regards the grant of benefits shall be accorded without any condition of residence. However, residence conditions of a specified time may be laid down in the case of benefits other than those the grant of which depends either on direct financial participation by the persons protected or their employer, or on any qualifying period of occupational activity.

In addition, the Convention lays down a conditional obligation to pay old-age pensions, invalidity and survivor's benefits and death grants to beneficiaries resident abroad.

ILO News, June 28, 1962

* * *

When a married man pulls out a fat wallet, you can bet he has two things — a camera and a child !

* * *

The man who makes no mistakes does not usually make anything.

—E. J. PHELPS

CHILDHOOD DEFORMITIES

LUC CHICOINE, M.D., F.R.C.P. (C)

Malformation in children may be congenital or subsequent to birth abnormalities. Early diagnosis, specific treatment and care can bring about improvement in some instances.

Cleft Palate

This is a comparatively common congenital anomaly. It occurs in one out of 800 newborn infants and is the result of failure in normal fusion of the two halves of the palate. Normally, this takes place about the third month of intrauterine life. The cause is unknown but heredity plays some part. Cleft palate may occur by itself or in combination with a hare-lip. Upon examination, an abnormal palate with an open fissure extending towards the back is disclosed. Sometimes the fissure may extend forward and produce a direct opening into the nasal passage.

This abnormality leads to difficulties — often very serious ones — in feeding the baby since he has trouble sucking and chokes readily which involves the risk of aspiration. Great care is required in order to accustom the baby to nurse adequately. To prevent aspiration, he should be fed in an upright position. An ordinary nipple with an enlarged opening is frequently very satisfactory. In other instances, a special nipple, an eye dropper, a Breck feeder or gastric gavage must be resorted to temporarily.

Cleft palate can also produce serious speech defect. Surgical repair gives good results and can be effected around 18 months of age. Subsequent speech therapy will help the patient substantially. Immediate postoperative care must be meticulous. To avoid any injury to the palate, the child must be fed a liquid and semi-liquid diet using an eye-dropper or a teaspoon, as indicated, for several weeks. Careful suctioning of the nose and nasopharynx should be carried out frequently in the first few days to avoid possible pulmonary complications. The child must be restrained from putting his fingers or his toys into his mouth for several weeks.

Spina Bifida

This abnormality occurs when there is improper fusion of the posterior vertebral lamina. This means that the spinal canal is exposed and, in some instances, the meninges and cord can herniate through the opening. This lesion may assume one of three forms : the occult spina bifida, the meningocele and the meningomyelocele.

The first form is usually asymptomatic. There is no abnormal displacement of structures. A dimpled area, a sinus or an area of hypertrichosis may be found on the adjacent skin surface but the abnormality is only discernible through x-ray. No treatment is required.

In meningocele there is a visible mass that contains cerebrospinal fluid and meninges. The meningomyelocele also contains a portion of the spinal cord and nervous tissue.

These lesions can occur at any level of the spinal cord and may lead to a variety of neurological disorders such as paralysis, sensorial changes and difficulty in sphincter control. A malformation of the base of the skull that may result in the development of hydrocephalus frequently accompanies meningomyelocele (Arnold-Chiari syndrome).

Neurological examination determines the advisability of operation in these conditions. Surgery gives good results

but does not correct existing neurological damage. Operation is usually ruled out if the infant is hydrocephalic or has total paralysis of the lower extremities. Prevention of infection and injury is of prime importance in both meningocele and meningomyelocele. The child should be postured on his abdomen and the mass protected with a ring of cotton or air-foam. The surface of the lesion must be kept clean and protected against contamination by feces or urine in particular.

Hydrocephalus

To understand the pathology of this condition, certain facts must be recalled. Cerebrospinal fluid is secreted in the lateral ventricles and absorbed into the general circulation in the cerebral subarachnoid space. Between the process of secretion and absorption the fluid circulates through the ventricles and flows down around the spinal canal.

Hydrocephalus results from the accumulation of fluid within the ventricles. This may result from faulty absorption into venous circulation or from obstruction that prohibits normal subarachnoid circulation. Several lesions may be responsible for the development of this condition: Congenital anomaly, cerebral tumor, meningitis. The accumulating fluid causes a progressive enlargement of the baby's head with separation of the sutures and widening of the fontanels. There is likely to be brain damage with variable degrees of mental retardation as the end result.

Modern techniques permit definite localization of the lesion and estimation of its nature in many cases. These procedures include pneumoencephalogram, ventriculogram, dye injection. Once diagnosis has been established, the possibility of surgery can be considered, depending on the type of lesion, its locale and the degree of neurological involvement. In some instances operation can be highly effective but in many cases it is only palliative, slowing the development of lesions temporarily.

Pyloric Stenosis

To understand this condition it should be remembered that the pylorus is a sphincter that controls the discharge of the gastric contents from the stomach into the intestine. In pyloric stenosis, for some unknown reason that may be congenital, the pylorus becomes elongated and the muscles of the sphincter are hypertrophied. The condition develops gradually until passage of the gastric contents is almost completely obstructed.

Pyloric stenosis is seen most often in first-born male babies between the ages of three and six weeks, but rarely before two weeks or after two months. Symptoms include vomiting which becomes progressively more troublesome, is characteristically projectile and is not accompanied by nausea or anorexia. The baby's weight remains stationary for a time, then falls. The mother notices that there is constant constipation. At this stage the condition is readily detected by physical examination.

There are four important signs to note in diagnosing pyloric stenosis. Loss of weight is an obvious one. Dehydration develops gradually and is often so marked that it is the reason for the child being hospitalized. The third factor is the presence of visible peristaltic waves immediately after the child has been fed. The waves go across the abdomen from upper left to lower right. Last, and most important, is the discovery on palpation of the olive-shaped pyloric sphincter. Diagnosis can be confirmed by the use of a barium meal and x-ray.

There are two possible forms of treatment. Medical care depends upon thickened feedings and antispasmodics and has the disadvantages of a long period of hospitalization plus the need for very intensive supervision. Treatment of choice in this country is surgery. The operation is simple and the baby can be discharged as a cure after a very few days. Both forms of treatment require the administration of adequate amounts of intravenous fluid.

Mongolism

This is a combination of congenital abnormalities seen in about one to three cases per 1000 births. The cause is, as yet, unknown but recent investigation has advanced our knowledge considerably. We now know that ab-

normalities in chromosome arrangement play a part. While the cells of the normal individual have 48 chromosomes, most individuals affected by mongolism have only 47. In the few affected who have the normal number of chromosomes, certain ones of these are abnormal. Since medical treatment can neither prevent nor cure mongolism, diagnosis is the most important aspect in the program for these patients and it is largely dependent upon clinical signs supported to some extent by tests. The degree of mental deficiency varies but, in general, is extensive enough to make the child non-educable. This retardation is obvious within the first few months of life.

The facial appearance in mongolism is, in general, so characteristic that diagnosis can be based on this alone. The head is small for the child's age. The orbital cavities are small and slanted upwards at the external edge. A fold of skin covers the inner canthus and caruncle of the eyes. On physical examination, the child is seen to have a protuding tongue since the oral cavity is small; a short, broad, flattened nose; large, short hands with the little finger curving inwards; an enlarged space between the first and second toes; hypotonic musculature and a protruding abdomen. Umbilical hernia, congenital heart disease and susceptibility to upper respiratory infections are common complications in these children.

Laboratory investigation produces generally normal values but radiological examination of the pelvis reveals characteristic changes while chromosome studies verify a provisional diagnosis. If there is no heart involvement, prognosis is favorable as far as life span is concerned.

These children should be trained to the full extent of their capabilities. Frequently, depending on family circumstances, placement in an institution for the mentally retarded may be the best solution.

Common Respiratory Conditions

LUC CHICOINE, M.D., F.R.C.P. (C)

Signs and symptoms, prevention and treatment of common childhood ailments.

Laryngitis and Laryngotracheobronchitis

Like the adult, the child's larynx is composed of cartilage, muscle and mucous membrane. Inflammation of the laryngeal mucous membrane is commonly called laryngitis. This condition is particularly serious in infants and children because of the very small opening into the glottis. Swelling in this area can produce complete obstruction rapidly and acute asphyxia which may be fatal.

Laryngeal infections in infants and children may be bacterial or viral in origin.

Bacterial Laryngitis

a. Diphtheric laryngitis or "true croup" is characterized by the formation of a false membrane which may cause complete obstruction of the larynx and trachea. It is accompanied by marked systemic effects due to toxicity and fever.

b. Laryngitis due to *Hemophilus influenzae* is equally serious due to the accompanying extensive edema.

Viral Laryngitis

The name "false croup" is applied to the combination of symptoms accompanying this condition.

The clinical symptoms are extremely typical. The child develops a hoarse voice and a cough, either immediately or gradually. Difficult breathing, particularly on inspiration, is observed. The whistling sounds heard on inspiration are referred to as stridor. Respiratory difficulty can become progressively worse, terminating in complete asphyxia and death.

Generally speaking, the prognosis for laryngitis is good except in certain cases of diphtheritic croup or in some types of bacterial infection. All of these infections require very close observation, principally in hospital, since they develop so quickly and exhibit such severe symptoms.

Treatment

1. The patient's environment should have very high humidity. In the home, the bathroom can be used to secure this by turning on the hot water tap in the shower and filling the room with steam. The specially adapted hospital unit in which humidity can be maintained up to 100 per cent is even more desirable.

2. Administration of appropriate antibiotics and, in some instances, cortisone.

3. In very severe cases where com-

plete obstruction appears imminent, tracheotomy may be performed. This procedure is frequently life-saving when carried out at the opportune moment.

Laryngotracheobronchitis

This is the term applied to bacterial or viral infections of the upper respiratory tract — larynx, trachea and bronchi — that occur in children especially during the winter months.

The clinical picture is akin to that of acute bronchitis. There is a cough, scattered râles and laryngeal stridor. The course of the disease is usually uneventful when treatment is based on antibiotics, expectorants and increased humidity. Administration of oxygen is required rarely.

Otitis Media

This condition is seen very frequently in children, especially in babies. It is more common in the latter group because the Eustachian tube which links the oropharynx with the middle ear is so very short, and the lying position favors spread of infection. Otitis media is usually a complication of pharyngitis, adenoiditis and rhinopharyngitis. It may also be associated with contagious diseases such as measles and scarlet fever. Common causative organisms are the staphylococcus, streptococcus and *Hemophilus influenzae*.

The child with otitis media develops a fever and pain in the affected ear. Other less specific symptoms may also appear : Irritability, insomnia, anorexia and occasionally nausea and vomiting. Examination of the ear discloses a reddened and often bulging tympanic membrane. It is important to detect the presence of otitis media because of possible subsequent complications such as chronic otitis, mastoiditis and more rarely, septicemia, meningitis or labyrinthitis. Chronic otitis is one of the causes of deafness. Inspection of the ears should be a part of the child's routine physical examination.

Medical treatment for otitis is very effective. Surgery is required only when there has been neglect in establishing early treatment. Therapy consists of the administration of antibiotics for at least seven and preferably ten days. Nasal decongestants are also helpful. The possibility of adenoidectomy should be considered in children who have recurrent bouts of otitis or in those with a chronically obstructed nose.

Fibrocystic Disease

This condition affects the exocrine glands of the body. It is hereditary and occurs fairly frequently. Not all glands are involved and those that are show varying degrees of affection. The symptomatology depends on the gland affected.

Bronchial Glands

These glands are involved in more than 90 per cent of cases of fibrocystic disease. Ordinarily, beginning at the age of a few months, the child suffers from repeated pulmonary infections — bronchopneumonia, pneumonia and bronchitis. Each infection can be treated but the lung never returns to normal. Most of the time the pulmonary conditions become progressively worse. The degree of involvement determines prognosis. Deaths are numerous.

Fibrocystic disease should be suspected in children who suffer from frequent pulmonary infections and particularly so if malnutrition and chronic diarrhea are also associated. The prognosis depends upon the pulmonary lesion. Treatment is not specific. The majority of children affected die at an early age but with modern treatment — aerosol, antibiotics, vitamins, pancreatic enzymes — an increasing number survive.

Foreign Bodies

Aspiration of a foreign body should be considered a possibility if respiratory distress suddenly develops.

The main symptoms are : Anxiety, dyspnea, rapid respirations, epigastric indrawing, cough and possibly cyanosis. Frequently, after the initial episode, symptoms may disappear for several hours or days, then gradually reappear. Diagnosis is made from the history, physical examination and, in particular, x-rays which show the object itself if it is opaque or indicate the pulmonary condition that has developed (emphysema, atelectasis). The main treatment is removal of the foreign body by means of bronchoscopy as quickly as possible and administration of antibiotics to control the secondary infection. Humidified oxygen is used to offset accompanying anoxia.

Organic substances are the most dangerous aspirants since they produce a very intense inflammatory reaction. Peanuts are the most frequently aspirated vegetable material and are the most dangerous since they are highly irritant and often difficult to extract.

Prevention of foreign object aspiration includes avoidance of putting small objects at the disposal of children, especially if they are at an age where they put such things in their mouths. Peanuts and "chips" should not be given to children under three.

THE RAT RACE

LOUISE H. ROBERTSON

Visual aids are commonplace in teaching today but these live visual aids and the effect of good and poor diets on them, will be remembered for a long time by the children who cared for them.

Two papers* which were presented at our Annual Regional Conference of Area No. 4 in the Spring of 1961 spurred me to make plans for a nutrition project at the senior public school in St. Marys, Ontario. The paper emphasized the following points :

That a nation-wide health problem exists in our concern over teenage nutrition;

that teenagers, as parents-to-be, and especially teenage girls, need special guidance in developing good nutritional habits;

that in 1957, 31 per cent of all babies in Canada were born to mothers under 20 years of age;

that radiological studies have found the bones of teenagers to be less dense than younger children or adults reflecting inadequate calcium stores concomitant with the period of rapid longitudinal growth;

that food fads of teenagers are a hazard to the future mother.

Miss Trenholme suggested that in order to influence our teenagers early, nutrition projects with rat feeding experiments should be held in elementary schools, especially in Grades 6, 7 and 8, when the students are very susceptible to ideas and easily impressed.

Early in September, 1961 the teachers of Grades 6, 7 and 8 were approached and asked to cooperate with a nutrition survey and experiment. The plan was outlined to them and samples of helpful teaching material left for them to choose from to be ordered from the Ontario Department of Health. All seemed very interested at the time and one of the Grade 6 teachers volunteered to have the rats in her room.

Miss Trenholme was consulted and she made a visit to St. Marys to give helpful suggestions. Later, she forwarded a copy of *Guide For Animal Feeding Experiments* which proved to be of a valuable assistance.

The teachers were asked to stress nutrition in their health teaching during the autumn term. Some of the teachers did an excellent job and used available health education material which they obtained from me and from the Associated Milk Foundation. Others apparently made little effort to emphasize nutrition until the survey was in progress.

Early in November the students were told that six white rats would be

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* These papers were : "Nutrition in Pregnancy" given by Dr. G.H. Beaton, Associate Professor of Nutrition, School of Hygiene, University of Toronto and "Prenatal Nutrition in the Public Health Program" given by Miss Marilyn L. Trenholme, Senior Nutritionist, Ontario Department of Health.

making their home in the school for a few weeks and that they would be responsible for feeding and caring for them. They were told that three in one cage would be fed all the foods that they themselves ate if they followed Canada's Food Guide and that the others would be fed a poor diet.

A contest or "Rat Race" in which the students were to take part and the use of the "Score Sheet for each Day's Meals" was explained to them. Fortunately, we had two classes in each of the three grades 6, 7 and 8 in this school. "Rat Race," a competition between the boys and girls, was organized. Three of the classes were asked to make posters or graphs. A bar graph, called a "Rat Race," was used to indicate the number of points made by the pupils. A poster broke the scores down showing the number of points obtained by boys and girls in the avrious foods — milk 17, fruit 16, vegetables 16, protein foods 17, whole grain cereals and bread 15, and Vitamin D preparations 6. The third was a weight graph for the rats.

For three consecutive weeks, before the actual demonstration was started, score sheets were given out to the boys and girls in each of the grades. The teachers were responsible for explaining how the charts were to be used.

The six rats were named by various rooms before their arrival. They were to have been delivered on a Tuesday and the students eagerly awaited the arrival of the train. Much to their disappointment they did not come. However, they appeared the following day amid much excitement.

They were all weighed and marked with "Magic Marker" for identification, placed in two wire cages, and their weights marked on the graphs.

We used diet suggestion No. 3 in the *Guide for Animal Feeding Experiments* contrasting the effects of a generally poor diet with that outlined in "Canada's Food Guide." We added raw oatmeal to the good or A Diet. The poor diet was B. Most of the food was supplied by the students but the more expensive items, such as eggs, cheese and a Vitamin D preparation, were brought by the Board of Health. Fortunately, the weather was cool and refrigeration did not prove a problem since the perishables were kept on the outside window sill. Powdered milk was used. The students took turns feeding the rats and cleaning the cages and really took extreme interest in the entire project.

On arrival the rats weighed from 60 to 90 grams each. I made certain that there were both small and large rats given each diet. By so doing if we had any fatalities with the smaller ones they would not have been on the same diet.

Contestants in the Rat Race

For the first three weeks I weighed the rats each week myself. During the fourth and fifth weeks the students weighed them. In each of the first three weeks those on the A Diet gained from 20 to 30 grams each, while those on B Diet gained 10 to 15 grams.

At the end of three weeks the cages, weight graphs, diet posters, and flannel graphs illustrating the foods fed were brought to my office. I visited each room and pointed out the physical changes to be noted between the two groups. Then each classroom of students came down and saw for themselves the difference in characteristics of the rats. A considerable difference could be seen. The students in the classroom where they were housed were very keen. They recognized in the poorly-nourished rats such signs as sniffles, untidiness, irritability, anemia, scruffy fur, etc. We then started to give Diet A to the second group.

One interesting development was

that two of the rats on Diet A developed bald areas. These were the result of the children vigorously marking them with the "Magic Marker." When they eased the pressure of marking, the hair grew back in a few days.

The first week that the poorly-nourished rats were fed Diet A they very quickly showed improvement. They gained well and soon were much tidier in their habits.

The week before the Christmas holidays the survey was finished. The results were explained to the students and the improvements seen in the poorly-nourished rats when fed Diet A were emphasized.

The children were given more score sheets and were asked to keep them for another week and to try to improve their own nutritional habits. Many did. Out of a possible average of 110 points, the over-all average of the school was 85 which is considered good. This fairly high score could be partially attributed to the emphasis which the teachers put on nutrition. The boys of Grade 7 won the "Rat Race" with a score of 89; the boys of Grade 6 had the lowest average with 80 points.

It is of interest to note that the class of boys and girls combined, who had the top score of 93, also had the neatest score sheets which required the least mathematical corrections. On further investigation I found that they were the "cream of the crop" students of a combination of grades 5 and 6. In contrast, the lowest average was that of a group of "slow learners" girls with 69 points.

In February, 1962 the entire project was completed at the Home and School meeting at which time the film "Food For Freddy" was shown. A panel composed of a mother, a teacher and myself explained the purpose of the project, the procedure and the improvement seen in the daughter of this particular mother. A question period followed.

Education . . . has produced a vast population able to read but unable to distinguish what is worth reading.

G. M. TREVELYAN

Learning hath gained most by those books by which the printers have lost.

—THOMAS FULLER

* * *

There is only one thing in the world worse than being talked about, and that is not being talked about.

OSCAR WILDE

It takes two to speak the truth, — one to speak, and another to hear.

H. D. THOREAU

* * *

Let onion atoms lurk within the bowl,
And, scarce suspected, animate the whole.
"Recipe for Salad,"
REV. SYDNEY SMITH

About Books

Dynamic Psychiatry in Simple Terms by Robert R. Mezer, M.D. 178 pages. Springer Publishing Company Inc., 44 East 23rd St., New York 10. 2nd ed. 1960.
Reviewed by Mrs. Charlotte Anne Cormack, 125 Dorval Ave., Montreal 33.

To present psychiatry in a manner that enlightens rather than confuses students is the purpose for which this book was written. It has been revised to keep up with developments in psychiatry in the past few years. Although the character of this edition remains unchanged from the first, consideration has been given to terminology based on the *Diagnostic and Statistical Manual* of the American Psychiatric Association; the results of drugs such as antidepressants and tranquilizers; the socio-legal progress made in the treatment of criminals.

Dr. Mezer has divided his book into four sections. The first deals briefly with the various factors involved in arriving at a psychiatric evaluation of the mentally ill person. The second section considers the development of the human personality with reference to constitutional, situational and developmental influences. The major emphasis of his discussion is placed on the latter aspect. The third, which comprises one-half of the book, is concerned with a discussion of the classified mental illnesses. The author describes each one in terms of symptomatology, etiology and treatment. Because the book is devoted mainly to dynamic psychiatry, the discussion of the organic brain diseases and mental deficiency is too brief to provide a full picture of these two problems. In the final section, life is considered as a learning process. The main emphasis of the discussion is placed on the preschool and adolescent years. The discussion provides an easily understood application of many of the concepts outlined in the second section.

The author's style is simple. There is frequent use of examples to further clarify the concepts presented. By the omission of subheadings, the author has provided a story which holds smoothly together and does not draw attention to parts. He makes good use of footnotes to provide concise biographical sketches of persons responsible for many of the concepts presented. Psychiatric terminology, when used, is kept to a minimum and is explained simply at the particular point where it is used.

This book could be used best by student nurses studying psychiatry for the first time. It provides understanding of most of the basic psychiatric concepts in a direct and simple manner.

Psychiatric Nursing by Ruth V. Matheney, R.N., Ed.D. and Mary Topalis, R.N., B.S., M.A. 281 pages. The C. V. Mosby Company, St. Louis, Mo. 1961.
Reviewed by Mrs. C. Yannikosta, Saskatoon, Sask.

The authors have made an attempt to shift the emphasis from understanding *psychiatry* to understanding *patients*. I feel that their goal has been well accomplished.

Throughout the book emphasis is placed on behavior patterns according to their characteristics, such as aggression, withdrawal, projection, etc.

The material is presented in an interesting and uncomplicated manner that should make it easily understood from the student's point of view. Psychiatric terminology has been reduced to a minimum but an adequate glossary has been included. Some mention should be made of the excellent chapters on nursing care.

I consider this text excellent for use by student nurses, and quite satisfactory as a psychiatric text.

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Director, Personnel Services,

DEPARTMENT OF NATIONAL HEALTH AND WELFARE, OTTAWA

Hand Registered Nurse for modern 21-bed hospital within easy reach of Victoria. Duties to commence 1st January 1963. Salary in accordance with RNABC agreement. Excellent personnel policies include superannuation and medical plan. Preference will be given to applicant with good O.R. and obstetrical experience and who is prepared to live in modern staff residence at $45 per mo. Apply giving full particulars of experience, training, age, marital status, etc. to: The Administrator, Lady Minto Gulf Islands Hospital, Ganges, British Columbia. 2-25-1

General Duty Nurses for small active hospital. Salary $294 for unregistered Nurses in B.C. $312 registered, with yearly increments. Nurses' home available. For further particulars write: The Administrator, Lady Minto Hospital, Ashcroft, British Columbia. 2-4-1

General Duty Nurses for 200-bed General Hospital with School of Nursing. Salary range $309 to $374. Preplanned shift rotation, B.C. registration essential, 4-wk. vacation after 1-yr. Apply: Director of Nursing, Royal Inland Hospital, Kamloops, British Columbia. 2-32-1

General Duty Nurses for 31-bed hospital situated in the scenic Fraser Canyon. Salary: $300 non-registered; $315 B.C. registered. Nurses' home. M.S.A. Apply: Administrator, St. Bartholomew's Hospital, Lytton, British Columbia. 2-39-1

General Duty Nurses for 40-bed hospital. Salary for B.C. registered nurses, $309-$374; non-registered B.C. nurses, $294. Nurses' residence available. Apply: Director of Nursing, Nicola Valley General Hospital, Merritt, British Columbia. 2-41-1

General Duty Nurses for 110-bed hospital in northwestern B.C. Salary—non-registered $309, B.C. registered $324-$389. Travel allowance, newly furnished residence available. For full details contact: Director of Nursing, General Hospital, Prince Rupert, British Columbia. 2-58-2

General Duty Nurses for well-equipped 80-bed General Hospital in beautiful inland valley adjacent Lake Kathlyn & Hudson Bay Glacier. Initial salary $324, maintenance $47.50, 40-hr. 5-day wk., 4-wk. vacation. Boating, fishing, swimming, golfing, curling, skating, skiing. Comfortable nurses' residence, rail fare advanced if necessary. Apply: Sacred Heart Hospital, Smithers, British Columbia. 2-67-1

General Duty, Operating Room & Experienced Obstetrical Nurses for 434-bed hospital with school of nursing. Salary: $309-$374. Credit for past experience & postgraduate training. 40-hr. wk. Statutory holidays. Annual increments; cumulative sick leave; pension plan; 28-days annual vacation; B.C. registration required. Apply: Director of Nursing, Royal Columbian Hospital, New Westminster, British Columbia. 2-73-13

BRITISH COLUMBIA

Graduate Nurses & Certified Nurse Aides for new 75-bed hospital opened September 1962. Salary B. C. reg. Nurse : 1962 - $309-$374 — 1963 - $320-$387; salary Non-reg. Nurse : 1962 - $294 — 1963 - $305; Certified Nurse Aides : 1962 - $200-$221. RNABC personnel policies in effect, very active town in Cariboo ranching country. Apply : Director of Nursing, Cariboo Memorial Hospital, Williams Lake, British Columbia. 2-80-1

Graduate Nurses and Certified Nursing Assistants for 70-bed acute General Hospital on Pacific Coast. Salary for B.C. registered $309 with regular increments; unregistered $294; Nursing Assistants $205-$225. Board and room $25 per mo., 28-day vacation plus 10 statutory holidays after 1 year. Superannuation and medical plans. Apply: Director of Nursing, St. George's Hospital, Alert Bay, British Columbia. 2-2-1

Graduate Nurses for 60-bed modern hospital in resort area on Vancouver Island. R.N. basic $309 with yearly increments according to RNABC personnel policies. Enquiries: Director of Nursing, Campbell River & District General Hospital, Campbell River, British Columbia. 2-9-1

Graduate Nurses for 20-bed hospital, 35-mi. from Vancouver, on Coast. Salary & personnel practices in accord with RNABC. Bus & train transportation, accommodation available. Apply: Director of Nursing, General Hospital, Squamish, British Columbia. 2-68-1

Operating Room & Obstetrical Nurses, British Columbia registered, for modern 450-bed acute General Hospital, located on South Vancouver Island. Basic salary $309, credit for experience & postgraduate preparation, personnel policies in accordance with RNABC. For particulars write to: Director of Nursing Service, St. Joseph's Hospital, Victoria, British Columbia. 2-76-5

MANITOBA

Registered Nurses (2 — duties to commence Dec. 1) for modern 16-bed hospital with attractive residence area. Starting salary for experienced personnel: $325 with yearly increments, less $45 per mo. for maintenance. 40-hr. wk. For further information apply to: John Hiscock, Secretary-Treasurer, District Hospital, Baldur, Manitoba. 3-4-1

Registered Nurses (2 immediately) for The Glenboro Hospital. Starting salary at present: $305 per mo. Starting salary effective January 1st, 1963: $330 per mo. Glenboro is situated on Manitoba Highway No. 2, midway between Winnipeg and Brandon. Good religious, social, recreational and sporting facilities available. Residence accommodation in 2 year old residence. Hospital is only 7 years old. Application forms and personal policy booklet mailed on request. Applicatcns and enquiries to: Mr. S. A. Oleson, Box 310, Glenboro, Manitoba. 3-28-1

Registered Nurses & Licensed Practical Nurses (Immediately) for 700-bed modern General Hospital. Positions as **Head Nurse & General Duty** available on general medical & surgical wards, maternity, nursery, operating room, eye, ear, nose & throat, pediatrics & psychiatry. Salary in accordance with qualifications & experience. Must be eligible for Manitoba Registration. For further information write: Director of Nursing Service, General Hospital, St. Boniface, Manitoba. 3-72-7

Registered Nurses for General Duty in 18-bed hospital, salary $315-$355, full maintenance $45 per mo., 40-hr. wk., generous personnel policies. (Salary increase planned for Jan. 1/63). Apply: Administrator, Community Hospital, Reston, Manitoba. 3-46-2

Registered General Duty Nurses (2 required for the Hunter Memorial Hospital, Teulon, Manitoba). 20-bed fully modern hospital, salary $305 per mo., 40-hr. wk., full maintenance available at the hospital for $45 per mo., increment of $5.00 every 6-mo. for 8 increments. Duties to commence immediately. For further information and application from apply to: Mrs. Olive Campbell, Superintendent, Teulon, Manitoba. 3-63-1

General Duty Nurses (3) for new 85-bed hospital. Good salary and generous personnel policies. Apply: Director of Nursing, Portage Hospital District No. 18, Portage La Prairie, Manitoba. 3-45-1

Graduate Nurses (4 or more immediately). Basic salary: $305 plus allowance for past experience. $5.00 increments every 6 mo. Separate residence with room and board available at $45 per mo. Free laundry of uniforms. Group insurance available. Apply: The Administrator, or, The Matron, The Altona Hospital District No. 24, P.O. Box 600, Altona, Manitoba. 3-1-1

NOVA SCOTIA

General Duty Nurses for modern 35-bed hospital situated on beautiful South Shore. Good personnel policies. Excellent living quarters. Apply Superintendent, Fishermen's Memorial Hospital, Lunenburg, Nova Scotia. 6-21-1

General Duty Nurses for completely new, modern 165-bed hospital, full complement of services. Starting salary: $260 per mo. Good personnel policies. Apply to: Director of Nursing for particulars, Regional Hospital, Yarmouth, Nova Scotia. 6-44-1

ONTARIO

Operating Room Supervisor with postgraduate course for active operating room in 86-bed hospital. Good salary and employee benefits. Apply to: Director of Nursing, General and Marine Hospital, Collingwood, Ontario. 7-31-1

Superintendent of Nurses for 18-bed Private Hospital. Ontario registration a requirement. Registered Nurse with senior supervisory experience or experience as Superintendent of small hospital would fill requirements. 2-room apartment with bath and all meals supplied for $20 per mo. 4-wk. annual vacation following 1-yr. employment, 8 statutory holidays. Hospitalization, Medical-Surgical and Group Insurance. Moving expenses up to $50 refunded following 6 mo. employment. Salary scale will be forwarded following application. Apply: Secretary, Board of Directors, Lady Dunn Hospital, Wawa, Ontario. 7-140-1A

Assistant Superintendent (immediately) for small hospital. **Registered Nurse with operating room experience.** The usual hospital fringe benefits. Apply stating qualifications, experience & give references to: The Superintendent, Chesley & District Memorial Hospital, Chesley, Ontario. 7-25-1

Nursing Supervisors, Registered Nurses and Cert. N. Ass'ts. Positions available on staff of 90-bed hospital. Community favorably located, 50-mi. south-west of Ottawa, 60-mi. north-east of Kingston; population 10,000. Apply to: Director of Nursing Service, St. Francis General Hospital, Smiths Falls, Ontario. 7-120-1

Head Nurse (experienced) for 22-bed Pediatric Dept. General and Marine Hospital, Owen Sound, Ontario Georgian Bay Area. Good personnel policies and salary. Apply: Director of Nursing, Owen Sound, Ontario. 7-94-1

Registered Nurses for expanding General Hospital, Medical, Surgical, Operating Room & Obstetrical services, at Ajax, Ontario on Highway 401, 20 mi. east of Toronto, hourly bus service to hospital. Salary in accordance with qualifications & experience, increments every 6 mo., sick & vacation time after 6 mo., sick time cumulative to 14 days, 37-1/2 hr. work wk., pension plan, living-in accommodation. Apply to: Director of Nursing, **Ajax & Pickering General Hospital, Ajax Ontario. Nurses from Europe & United Kingdom,** apply to: Canadian Department of Labor, 61 Green Street, London, W.1, England. 7-1-1

Registered Nurses for 34-bed hospital, min. salary $320, 3-wk. vacation with pay, sick leave after 6-mo. service. **Certified Nurses Assistants** salary $220, 2-wk. vacation with pay. **All staff** — 5-day 40-hr. wk., 9 statutory holidays, pension plan & other benefits. Apply to: Superintendent, Englehart & District Hospital, Englehart, Ontario. 7-40-1

Registered Nurses for 86-bed General Hospital in French-speaking community in northern Ontario. Salary range $330-$360 per mo., 4-wk. vacation, 18 days paid sick leave, accommodation available in community, meals available in hospital if desired. Opportunity to learn French and English. For particulars apply: Notre-Dame Hospital, Hearst, Ontario. 7-58-1

Registered Nurses. Applications and enquiries are invited for general duty positions on the staff of the Manitouwadge General Hospital. Excellent salary and fringe benefits. Liberal policies regarding accommodation and vacation. Modern well-equipped 33-bed hopsital in new mining town, about 250-mi. east of Port Arthur and north-west of White River, Ontario. Pop. 3,000. Nurses' residence comprises individual self-contained apts. Apply, stating qualifications, experience, age, marital status, phone number etc. to the Administrator, General Hospital, Manitouwadge, Ontario. Phone: TAylor 6-3251. 7-74-1

Registered Nurses for immediate & future vacanices in this 42-bed hospital. Starting salary $320. Accommodation in new residence available. Pension plan & other benefits available. For full information apply to: Director of Nursing, New Liskeard & District Hospital, New Liskeard, Ontario. 7-83-1

Registered Nurses for 60-bed hospital, starting salary $300 gross per mo., good personnel policies. Apply: Superintendent, St. Marys Memorial Hospital, St. Marys, Ontario. 7-112-1

Registered Nurses & Certified Nursing Assistants for modern 75-bed hospital. Starting salaries — R.N.'S $310 per mo., C.N.A.'S $220 per mo. Single room accommodation available in the residence. Dryden (population 6,500) an industrial town, also center of extreme tourist area, is conveniently located midway between Winnipeg & the Canadian Lakehead. For further information regarding personnel policies, community activities, etc. please call or write: The Director of Nursing, Dryden District General Hospital, Dryden, Ontario. 7-36-1

Registered Nurses & Certified Nursing Assistants for 160-bed accredited hospital. Starting salary $320 & $220 respectively with regular annual increments for both. Excellent personnel policies including 5-day wk. Ontario hospital pension plan. Residence accommodation available. Assistance with transportation can be arranged. Apply: Director of Nurses, Kirkland & District Hospital, Kirkland Lake, Ontario. 7-67-1

Registered Nurses & Certified Nursing Assistants for 26-bed hospital. R. N. minimum salary $320, maximum $370, 28-day vacation after 1-yr. C.N.A. minimum salary $232, maximum $265, 2-wk. vacation after 1 yr., 3-wk. after 2 yr. Credit for past experience, $5.00 increment every 6 mo., 40-hr. wk. 8 statutory holidays. Room & board $45 per mo., 1-day sick leave per mo. Apply to: Mrs. G. Gordon, Superintendent, District Memorial Hospital, Box 37, Nipigon, Ontario. 7-87-1

Registered Nurses for General Floor Duty in 28-bed hospital, located in gold mining tourist area. Basic salary $315, 40-hr.wk., rotating shifts. Modern residence accommodation $30. Please apply to: Matron, Margaret Cochenour Memorial Hospital, Cochenour, Ontario. 7-29-1

Registered Nurses for General Duty in all departments including premature and new-born nursery, Isolation, Emergency and Recovery Room. Good salary and personnel policies. Apply: Director of Nursing, Victoria Hospital, London, Ontario. 7-73-10

Registered Nurses for General Duty for modern 40-bed hospital in resort town on beautiful Lake Huron. Starting gross salary $300, 40-hr. wk., 10 working days sick leave in 1 year, 50% unused sick leave paid at end of year, 50% single OHSC, PSI and Group Insurance paid, 8 statutory holidays, 4-wk. vacation after 1 yr., board and room $30, modern living quarters. Apply: Superintendent, Saugeen Memorial Hospital, Southampton, Ontario. 7-122-1

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Registered Nurses for General Duty & Operating Room in modern hospital (opened in 1956). Situated in the Nickel Capital of the world, pop. 80,000 people. **Salary: $305 per mo.** with annual merit increments, plus **annual bonus plan,** 40-hr. wk. Recognition for experience. Good personnel policies. Assistance with transportation can be arranged. Apply: Director of Nursing, Memorial Hospital, Sudbury, Ontario. 7-127-4

Registered Nurses for General Duty in modern 18-bed Private Hospital in iron mining town, 140 miles north of Sault Ste. Marie, Ontario. Starting salary $310 min. to $360 max., less $20 per mo. maintenance. Recognition for experience up to 3 years. Good accommodations & personnel policies. Transportation allowance after 6-mo. **Operating Room Nurse** starting salary $364 min. with postgraduate course to $414 max. with recognition for experience. Apply: Superintendent of Nurses, Lady Dunn Hospital, Wawa, Ontario. 7-140-1

Registered Nurses for Staff Duty & Operating Rooms in General Hospital. All patients' services in new modern building opened in November 1960. Good salary & personnel policies. Apply to: Director of Nursing, Arnprior and District Memorial Hospital, Arnprior, Ontario. 7-4-1

Registered or Graduate Nurses for modern 100-bed hospital located in summer resort district, 40-mi. from Ottawa. Apply: Director of Nursing, Public Hospital, Smiths Falls, Ontario. 7-120-2

Registered Nurses for all services including Psychiatry and Operating Room. Salary range $305 to $335 per mo., personnel manual sent on request. Apply: Director of Nursing, The Wellesley Hospital, 160 Wellesley Street East, Toronto 5, Ontario. 7-133-49

General Duty Nurses for an accredited 66-bed hospital. Starting salary: $305. Excellent personnel policies, pension plan, residence accommodation only 10 min. from downtown Buffalo. Apply: Director of Nursing, Douglas Memorial Hospital, Fort Erie, Ontario. 7-45-1

General Duty Nurses for modern 100-bed hospital. Registered start at $300 monthly, Graduates $250-$285; 40-hr. wk., benefits include accident, sickness & life insurance, hospital & medical insurance plans, & O.H.A. Pension Plan. **Male Nurse,** graduate or registered also needed. Apply: Miss Tillett, Director of Nursing, Leamington District Memorial Hospital, Leamington, Ontario. 7-69-1

General Duty Nurses for 100-bed modern hospital, southwestern Ontario, 32 mi. from London. Salary commensurate with experience & ability; $300 basic salary. Residence accommodation available. Pension plan. Apply giving full particulars to: The Director of Nurses, District Memorial Hospital, Tillsonburg, Ontario. 7-131-1

General Duty Nurses Male & Female & Certified Nursing Assistants (Immediately) for 86-bed hospital, 40-hr. wk., 8 statutory holidays & other employee benefits. Collingwood is situated on Georgian Bay & is noted as a vacationland with 7-mi. sand beach and great skiing on the Blue Mountains in winter. For further information apply: Director of Nursing Services, General and Marine Hospital, Collingwood, Ontario. 7-31-1

General Duty Nurses & Certified Nursing Assistants for new 50-bed hospital with modern equipment. 40-hr. wk., 8 statutory holidays, excellent personnel policies & opportunity for advancement. Tourist town on Georgian Bay. Good bus connections to Toronto. Apply to: Director of Nurses, General Hospital, Meaford, Ontario. 7-79-1

General Duty Nurses, O.R. Nurses & Certified Nursing Assistants for new 85-bed hospital with modern equipment, situated in a progressive town of 5,000 located 23-mi. from London, Ontario. Postgraduate education preferred, excellent personnel policies, salary commensurate with experience & qualifications, opportunity for advancement. Apply: Director of Nursing, Strathroy Middlesex General Hospital, Strathroy, Ontario. 7-125-1

Operating Room Nurses for general operating room work which includes cardiovascular, neurosurgery, genito-urinary, ear, eye, nose and throat, and orthopedic surgery. Good salary and personnel policies. Apply: Director of Nursing, Victoria Hospital, London, Ontario. 7-73-10

Public Health Nurse (qualified), for generalized program. Salary range $3,900-$4,500, annual increments, salary according to experience. Car expense allowance, full program pension, group insurance, hospitalization, 50% paid by board. Duties commencing immediately. Apply to: O.M. Kennedy, Secretary, Board of Health, Deep River, Ontario. 7-35-3

Public Health Nurses (Qualified) for generalized nursing service. Salary range: $3,800 - $4,750 based on experience. Apply to: Dr. J. M. McGarry, M.O.H. St. Catharines-Lincoln County Health Unit, St. Catharines, Ontario. 7-111-4

Nurses with certificate in public health, required by Stormont, Dundas & Glengarry Health Unit in the Seaway Valley area. Generalized program. Minimum salary $3,700, annual increment, allowance for experience, 5-day wk. Employer-shared surgical group benefits, pension plan & Ontario Hospital insurance, 3-wk. vacation, cumulative sick leave benefits, car allowance. Apply in writing giving qualifications & experience to: Miss Glenna French, Supervisor of Nurses, Box 1058, Cornwall, Ontario. 7-34-5

BERMUDA

Registered Nurses for Operating Room with operating room postgraduate course and/or experience, for 150-bed hospital. Travel allowance paid. For particulars, write: Matron, King Edward VII Memorial Hospital, Bermuda. 13-1-1B

QUEBEC

Operating Room Supervisor for modern, accredited 55-bed hospital. 40-hr. wk., 1-mo. vacation. Living accommodation available in new motel-style nurses' residence. Apply stating qualifications to: Superintendent, Barrie Memorial Hospital, Ormstown, Quebec. 9-52-1

Assistant Head Nurses; excellent personnel policies. Apply Director, Shriners Hospital for Crippeld Children, 1529 Cedar Avenue, Montreal, Quebec. 9-47-42

Registered Nurses & Certified Nursing Assistants for modern 55-bed General Hospital, salary $300 per mo., 5 semi-annual increases, 40-hr. wk., 4-wk. vacation. **Certified N.A.** starting salary $210, 3-wk. vacation, accommodation available in new motel-style residence. Apply: Superintendent, Barrie Memorial Hospital, Ormstown, Quebec. 9-52-1A

Registered Nurses and Nursing Assistants for 110-bed hospital for tuberculosis and other chest diseases. Situated in the heart of the Laurentian Mountains, 60-mi. north of Montreal, in the center of all winter sports. Salary in accordance with Association of Nurses of the Province of Quebec recommendations, with full maintenance, including private room in modern nurses' residence, 40-hr.wk., 8 statutory holidays, 4-wk. annual vacation. Apply: Director of Nursing, P.O. Box 1000, Ste. Agathe des Monts, Quebec. 9-57-1

SASKATCHEWAN

Superintendent of Nurses for newly constructed 30-bed hospital, salary increments according to SRNA schedule. Consideration given for past experience and training. Duties to commence immediately. Suite provided in newly constructed nurses' residence connected to hospital by tunnel. Apply in writing or telephone to: Mr. D.L. Drechsler, Administrator, Kerrobert Union Hospital, Kerrobert, Saskatchewan. 10-55-1

Matron and Graduate Nurse for 8-bed hospital in Southern Sask. Salary range for Matron $358-$453; R.N. $300-$380. Qualifications and experience considered. Duties to commence Jan. 1/63. 3-wk. vacation plus statutory holidays, 40-hr. work wk., modern residence on grounds. Apply to: Mrs. D. L. Knops, Sec.Treas., Rockglen Union Hospital, Rockglen, Saskatchewan. 10-110-1

U.S.A.

Head Nurses (Starting salary: $415,) **Staff Nurses** (Starting salary: $395) for 100-bed hospital located in the pleasant San Joaquin Valley. $10 differential for evening and nights. Liberal fringe benefits. Modern nurses' residence on grounds at $10 per mo. Call collect or write to: Director of Nursing, Tulare County Hospital, Tulare, California. 15-5-44

Registered Nurses for modern 374-bed JCAH fully accredited General Hospital. Located on beautiful San Francisco Peninsula, 20-min. drive from the heart of the city. Openings in all services. Excellent personnel policies. Many extra benefits and opportunities for advancement. Top salaries. Apply: Personnel Director, Peininsula Hospital, 1783 El Camino Real, Burlingame, California. 15-5-20

Registered Nurses. Career satisfaction, interest and professional growth unlimited in modern, JCAH accredited 254-bed hospital. Located in one of California's finest areas, recreational, educational and cultural advantages are yours as well as wonderful year-round climate. If this combintion is what you're looking for, contact us now! Staff Nurse entrance salary $370 with automatic increases to $435 per mo., supervisory positions at increased rate. Special area and liberal shift differentials paid. Excellent benefits including Blue Cross hospitalization and surgical coverage and liberal personnel policies. Professional staff appointments available in all clinical areas to those eligible for California licensure. Write today: Director of Nursing, Eden Hospital, 20103 Lake Chabot Road, Castro Valley, California. 15-5-12

Registered Nurses: We invite you to spend a winter in sunny California. Earn, learn, and enjoy life! Nurses coming together will be given same days off. Starting salary: $432 per mo. plus $25 bonus, evenings or nights. Experienced nurses who can do charge duty start at $455. Rooms in modern residence, $20 per mo. Openings on general medical-surgical wards, premature nursery, chest-medicine, neuro-surgery. Also need circulating nurses for O.R. Good in-service program, teaching hospital affiliated with 3 medical schools. Write for complete details to: Betty Hartwig, R.N., Box 1311, Los Angeles County General Hospital, 1200 North State Street, Los Angeles 33, California. 15-5-3D

Registered Nurses, Staff Nurses for permanent positions, various departments, days, eves., nights. Excellent starting salary, increments, benefits and working conditions in one of the largest and finest general hospitals in the West. For details write: Personnel Department, Queen of Angels Hospital, 2301 Bellevue Avenue, Los Angeles 26, California. 15-5-3G

Registered Nurses for private 258-bed hospital for men, women and children. Staff Nurse salaries from $355-$435, differentials for evenings, nights, communicable disease, operating room and delivery. Opportunities in all clinical areas. Holidays, vacations, sick leaves and health insurance. California registration required. Applications and details furnished on request. Contact: Personnel Director, Children's Hospital, 3700 California Street, San Francisco 18, California. 15-5-4

Registered Nurses General Duty for 230-bed approved teaching hospital, resort city. Starting salary $350 plus $22.50 shift differential, provision for housing allowance. Apply: Director of Nursing, Cottage Hospital, Santa Barbara, California. 15-5-39

Registered Nurses. Positions open in beautiful southern California hospital. Excellent opportunities. California registration available and required. Please apply to: Director of Nursing, Little Company of Mary Hospital, Torrance, California. 15-5-22

Staff Nurses for new modern 800-bed General and Tuberculosis Institution in beautiful San Joaquin Valley city — no smog — no snow — 235,000 in metro. area, midway between Los Angeles and San Francisco, close to 3 National Parks, 2 colleges and other cultural advantages. Full maintenance available. Immediate appointment $4,320 to $5,400 per year. Apply immediately to: Director of Personnel, Fresno County Civil Service, Room 101, Hall of Records Building, Fresno 21, California. 15-5-17A

Staff Nurses for 300-bed General Hospital. Attractive personnel policies plus differential for specialties, afternoon and night duty. Opportunities for advanced education. Apply to: Director of Nursing Service, Kaiser Foundation Hospital, Oakland 11, California. 15-5-3C

Staff Duty positions in private 428-bed hospital, non-registered graduates acceptable. Liberal personnel policies & salary. Write to: Personnel Director, Hospital of the Good Samaritan, 1212 Shatto Street, Los Angeles 17, California. 15-5-3B

Nurses for new 75-bed General Hospital. Resort area. Ideal climate. On beautiful Pacific ocean. Apply to: Director of Nurses, South Coast Community Hospital, South Laguna, California. 15-5-50

General Duty Nurses for various departments including surgery for 72-bed hospital. Starting salary $375 per mo. with periodic increases & fringe benefits. College town, tourist area, ideal climate. Contact: Superintendent, Alamosa Community Hospital, Alamosa, Colorado. 15-6-1

Registered Nurses, Licenced Practical Nurses for 250-bed hospital. Excellent benefits including retirement plan. Ocean bathing & housing accommodation available. Apply: Director of Nursing Service, St. Francis Hospital, Allison Island, Miami Beach, Florida. 15-10-2

General Duty Nurses for 54-bed hospital, minimum starting salary $350 per mo., located near Miami and West Palm Beach. Apply: Director of Nurses, Belle Glade Memorial Hospital, Belle Glade, Florida. 15-10-3

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Graduate Nurses (Professional) Choose a career at Chicago's renowned medical-teaching center. Various staff & special assignments available to provide a work setting compatible with your interests & experience. Starting salary to $420 per mo., plus $40 evening differential & premiums for special assignments. Fringe benefits include vacation to 4-wk. per year, 8 paid holidays, cumulative sick leave, Blue Cross & pension plan, private rooms in modern residence building. Your inquiries are invited: Director, Nursing Service, Dept. C.J.N., Mount Sinai Hospital, 2750 W. 15th Place, Chicago 8, Illinois. 15-14-10

Staff Nurses & Licensed Practical Nurses (Openings in several areas, all shifts). Minimum starting pay $77 R.N.'s.; L.P.N.'s $61 per wk., experience considered, differentials paid for reliefs, nights. Every other weekend off in small community hospital 2 miles from Boston. Living quarters available. Contact: Miss Elizabeth Hewitt, R.N., Director of Nurses, Chelsea Memorial Hospital, Chelsea, Mass. 15-22-1

Registered Nurses for 90-bed accredited hospital, top salary, excellent fringe benefits, good personnel policies, opportunities for promotion. Apply: Administrator, Sidney A. Sumby Hospital, 234 Visger Road, River Rouge 18, Michigan. 15-23-9

Staff Nurses 380-bed hosp. new 120 med-surg. unit. Trans. pd. 1st class air to Albuq. and return within U.S. in exchange for 1-yr. emp. contract. Come to New Mexico "Land of Enchantment." Career opportunities, largest pvt. JCAH accredited hosp. in state; near U. of New Mexico, R.N. & B.S. pgm. Practical Nurse pgm. accredited state & NAPNE. Vacancies, Med-Surg. & occasionally O.B., Peds., & O.R., salaries $315 per mo. even., night or O.R. with call; 6-mo. increases up to $375; days $300 per mo. with increases up to $360. Rotation from day duty is required only when no person desiring permanent P.M. of night tour is available. Liberal personnel policies include: optional Blue Cross, Discount Hosp. Services, pd. sick leave cumulative to 5 wks., annual physical exam., vacation 1 yr. — 2 wks., 2 yrs. — 3 wks., 5 yrs. — 4 wks. Active in-service pgm. Occasional vacancy hosp. owned apts. New Mexico licensure as professional nurse & U.S. Citizenship (or Immigration Visa) required. Write or call collect: Mrs. Emily J. Tuttle, Dir. of Nursing, Presbyterian Hospital Center, 1012 Gold, S.E., Albuquerque, New Mexico. Phone 243-5611. 15-32-3

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Graduate Nurses for 450-bed non-sectarian acute General Hospital with NLN fully accredited school of nursing. Liberal personnel policies include tuition aid for study at Western Reserve University. Opening of new main building has created attractive positions for Staff Nurses in medical, surgical, obstetric & pediatric divisions. Apartments available in immediate neighborhood. Apply: Miss Louise Harrison, Director of Nursing Service, Mount Sinai Hospital, 1800 East 105th Street, Cleveland 6, Ohio. 15-36-1D

Staff Nurses for large modern tuberculosis hospital, suburban Cleveland, Ohio. Monthly salaries start at $375 days, $407 evenings, $396 nights, with semi-annual increments, 5-day work wk., paid vacation & 6 holidays, liberal sick leave, comfortable accommodations in nurses' residence at low rate. Learn & earn at a progressive accredited hospital in a growing community. Write: Director of Nursing, Sunny Acres Hospital, Cleveland 22, Ohio. 15-36-1E

Registered Nurse (Scenic Oregon, vacation playground, skiing, swimming, boating & cultural events) for 295-bed teaching unit on campus of University of Oregon medical school. Salary starts at $372. Pay differential for nights & evenings. Liberal policy for advancement, vacations, sick leave, holidays. Apply: Multnomah Hospital, Portland 1, Oregon. 15-38-1

Staff Nurses (All Clinical Services) Base salary $350, opportunities for advancement, differential for 3-11 & 11-7 shifts, personnel policies, sick leave, retirement plan, 3-wk. vacation & laundry of uniforms. Orientation & in-service programs, housing available on campus. Apply: Director of Nursing Service, University of Texas Medical Branch Hospitals, Galveston, Texas. 15-44-5

Learn and earn in a teaching and research hospital affiliated with the University of Washington Schools of Medicine and Nursing. Good personnel policies, beginning staff nurse salary $365-$405 per mo. For further information, write: Director Nursing Service, King County Hospital, Seattle 4, Washington. 15-48-2A

MISCELLANEOUS

General Duty Nursing Staff for 50-bed active General Hospital, on main highway between Calgary & Edmonton. Salary: $290-$335. Experience recognized. Apply: Mrs. E. Harvie, Matron, Lacombe Municipal Hospital, Lacombe, Alberta. 1-54-1

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Public Health Nurse (Qualified) for generalized program in rural & semi-urban area adjacent to metropolitan Toronto. Excellent working conditions including pension plan, group insurance, & transportation arrangements. Write: Dr. R. M. King, York County Health Unit, 64 Bayview Avenue, Newmarket, Ontario. 7-84-2

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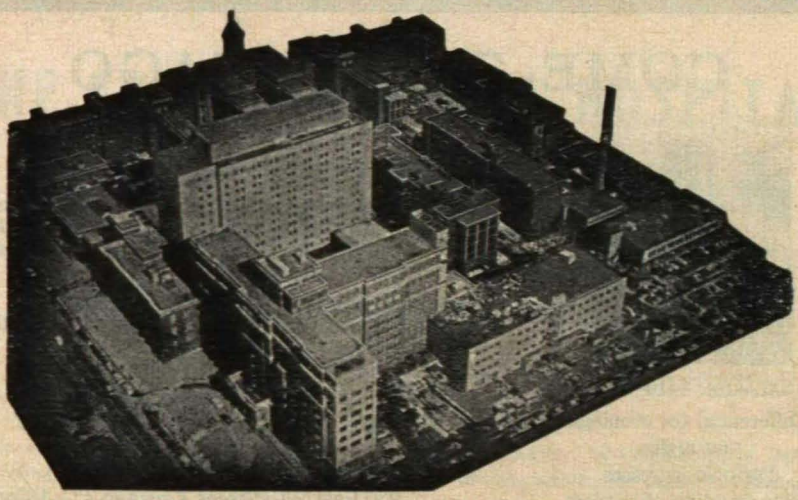

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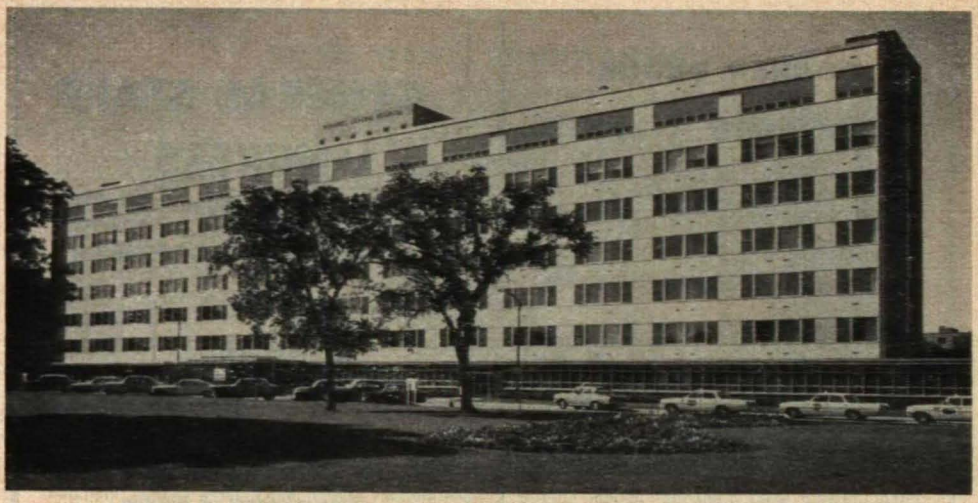

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